AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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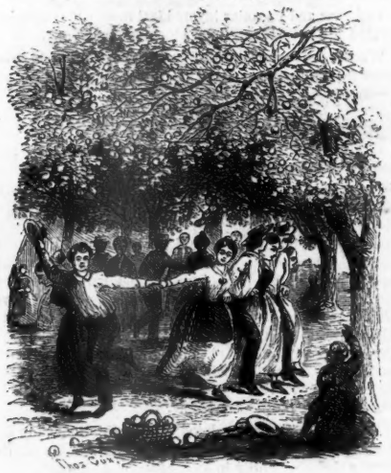


September.

"While he from all the stormy passions free
That restless men involve, hears, and but hears
At distance safe, the human tempest roar,
Wrapped close in conscious peace. The fall of kings,
The rage of nations, and the crush of States,
Move not the man, who, the world escaped,
In still retreats and flowery solitudes,
To Nature's voice attends, from month to month,
And day to day, through the revolving year;
Admiring sees her in her every shape;
Feels all her sweet emotions at his heart;
Takes what she liberal gives, nor thinks of more.
When Autumn's yellow luster gilds the world,
And tempts the sickled swain into the field,
Seized by the general joy, his heart distends
With gentle throes; and through the tepid gleams
Deep musing, then he best exerts his song."

THOMSON.

The burning heats of Summer are giving place to the cool bracing air of Autumn. The summer harvests are gathered, the barns are full of hay and grain, and the overflowing abundance stands in stacks and ricks, upon the meadow. The hard pressing work of the season is over, and we begin to take things a little leisurely. The corn has attained its growth, and the kernels are beginning to glaze. The potatoes, if full grown, keep safely in the hill. The apples are turning red and yellow upon the trees, and the lower bending of the limbs shows that every day is adding to the weight of fruit. There is rather gain than loss in delaying for a few days, the work that must be done. There is time now to attend to the little jobs that have had to lie over during Summer; to make fences, to ditch, and drain, to dig muck, and make compost—profitable work always on hand upon the farm. Those not driven by wheat sowing have time to review the season's toils, to project improvements, and to enjoy life.

There is perhaps no class in the community that suffer so little in the present troubled times, as the farmers. Outside of the immediate theater of the war, life moves on in its usual channels upon the farm. In all the cities the calamity is deeply felt. It has seriously interrupted business, and multitudes are thrown out of employment. There all the excitement, as well as "the pomp and circumstance of glorious war," is felt. But upon the farm, one would hardly know the convulsion through which the country is passing, but for the newspapers.

At all times the farmer's life flows more smoothly and peacefully, than that of other men. There is in it more of solid comfort. The scenes in which he mingles, and the objects of his daily contemplation, are calculated to make him cheerful and happy. Nature in all its freshness and beauty is ever spread out before him. It is not his genteel boast that he never sees the sun rise! The morning's prime is not to him a vulgar hour. He is up with the lark, and hears that choral song at early dawn, with which the birds begin their day. He beholds the first streak of light, and the heavens passing through all the changes of color—sober grey, purple, sapphire, crimson, to the full effulgence of the risen sun. There is joy in beholding these scenes, with every sense fresh from invigorating sleep.

The husbandman is much more independent in his circumstances than other men. Very generally, in this country at least, he owns the soil he tills, in fee simple. The roof that shelters his family, the barn that protects his crops and cattle, the acres that yield them sustenance, are his for a possession. He is made as secure in the enjoyment of his home, as it is possible for mortals to be. No landlord may turn him out at the close of the year. Every improvement made upon his premises, is for his benefit, and that of his family. There is joy in ownership in the soil, somewhat difficult to analyze, but a reality, as all know who have experienced it. The affections cling to it quite as tenaciously as to living things. With many, local attachments are much stronger than the love of animals. They can substitute one horse for another, or one cow for another, without any painful emotion, but the disruption of home ties would be felt as a life-long calamity. There is literally no spot like home to them. Their affections take root in the soil of their birth place, with every orchard they plant, with every ornamental tree they set by the road side. The home feeling grows with every crop they cultivate, with every fence they put up, and with every building they erect.

Here they are in a good measure independent of the world. The farm yields them almost every necessity of life, with a superabundance to exchange for its superfluities. This was more the case in the good old days of homespun, than at present, and if necessity ever requires it, we can go back again to the cards and the spinning wheel, to the hand shuttle and the loom. It adds not a little to the comfort of life, to know that our daily bread does not depend upon the caprice or necessities of an employer. No change in the times deprives the farmer of occupation. His work is laid out before him for years, and he knows that as long as the soil yields its increase, and he can work, there will be meal in his bin, corn in his crib, and pork in his barrel. His sheep will raise wool, and his meadows flax, whether cotton is king or not. The doors of the school-house will be open for his children, whether the temple of Janus is closed or open. The cities may be swept by the desolations of war, but the farms can hardly be ruined. The world must eat, and while wheat and corn grow, and calves and pigs make beef and pork, he will have something to sell, and a market for his products. It is one of the misfortunes of most other callings, that they are dependent for the necessities of existence. The laborer has nothing but labor to sell, and when that fails his condition is very sad.

It is another of the comforts of the farmer's calling, that his labors are lighter than those of most other men. His work is not nearly as exhausting to body and mind, as that of the merchant, or of people who follow trades; the greater strength and vigor, and the better health of farmers, as a class, are proof positive. They have wholesome food, fresh milk and butter, fresh meats and vegetables, and eggs laid in the nest and upon the table the same day. They pursue their toils in the open air, and for the most part with only such a tax upon the muscles as aids digestion. There is no overworking of the brain, no wearing anxiety about the uncertainty of trade, no bank-notes to meet at two o'clock, or be bankrupt in fortune. His bank of earth receives all his deposits, and is always ready to pay dividends. Look at that bin of corn, yellow as gold, and always exchangeable for it. Look at those porkers with broad backs, and sleek sides, every one a walking money bag, and growing heavier every day. Look at those fat cattle, and that span of Black Hawks. There is a small mint in each of them, that keeps down all pecuniary solicitude—and makes the owner's life a scene of cheerful toil.

Calendar of Operations for Sept., 1861.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by allowing for latitude.

Explanations.—*f* indicates the *first*; *m*, the *middle*; and *l*, the *last* of the month.—Doubling the letters (*ff*, or *mm*, or *ll*,) gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either, or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the *first* to the *middle* of the month.]

Farm.

Much of next year's prosperity depends upon the agricultural operations of September. If the great staple, wheat, be sown early on properly prepared ground, millions of dollars will be gained above what would result from doing the work carelessly. See that every acre receive all possible attention.

Agricultural Exhibitions—It will pay to attend them if practicable. A single suggestion received, or a new implement examined may be worth to you many dollars.

Buildings—Provide sufficient shelter for all animals to be wintered. Repair and paint all needing it. Read "Sermon on Stables," page 267.

Beans—Harvest, *m*, *l*. The haulm properly cured, and the beans themselves, are excellent for sheep.

Buckwheat—Secure as soon as about ripe. Save straw for occasional feeding, but mainly for litter and manure.

Butter—Lay down a full supply for Winter use. *Work thoroughly*, and pack in stone jars or sweet firkins.

Cabbages—Market those mature; keep the late well hoed.

Cattle—Stall feeding commenced early will give the best returns. Keep up the flow of milk from cows, with cuttings from the soiling patch and refuse from the garden, particularly if Fall feed be short.

Cellars—Thoroughly cleanse and put in order for Fall crops of roots, apples, etc.

Corn—Mark the earliest and most productive stalks to be gathered for seed. As soon as fully ripe, trace the ears together and hang them in a secure place. Cut the crop up by the ground before injured by frost, and set in well bound stooks, to be husked at leisure; this mode we consider preferable to topping the stalks.

Draining—Finish off each field of winter grain with deep draining furrows to carry off surplus surface water. Lay drain tiles wherever needed, as fast as circumstances will allow. Read the articles on Draining closely.

Eggs—Pack a sufficient supply for Winter use according to directions on page 246 (Aug. No.).

Fences and Gates—Keep in thorough repair, and build new as needed. In springy ground, lay drains to prevent the posts from "heaving out" by frost. Char the ends of posts, or dip in coal tar, to preserve from rot.

Grain—Thresh and store or market as soon as practicable. Protect bins from rats and mice. If infested with weevil, fumigate with sulphur. Keep a liberal supply for feeding upon the farm.

Hemp and Flax—Pull, *m*, *l*, and spread for rotting.

Hogs—Commence feeding grain early. Confine fattening hogs in separate pens. Read article on page 266.

Manure—Make needed preparations to manufacture all possible the coming Winter.

Plow, *ff*, for Winter grain if not finished. This is the best season to deepen the soil by turning up and exposing an inch or more of the subsoil to the action of frost.

Potatoes—Dig as fast as wanted for market, and leave the remainder until threatened by frost. Clear the ground from tops and weeds as fast as dug.

Poultry—Feed well to fatten for market or wintering.

Root Crops—Continue to cultivate until well grown.

Rye—Sow, *ff*, *m*, if not completed. Seeds of weeds, chess, and much other foul stuff may be separated by pouring the grain into strong brine and skimming them off.

Sheep—An occasional allowance of grain will prepare them for successful wintering. Supply regularly with salt.

Soiling Crops—Cut and cure for fodder before frost.

Sorghum—Commence manufacture of sugar and syrup, *ll*. Read article on page 270.

Straw—As fast as threshed, stack it or store under cover for feeding and litter.

Timothy—Sow with winter grain for meadow or pasture.

Weeds from the potato field, etc., which have matured seed, should not be mixed with manure, except where the seeds may be destroyed by active fermentation.

Wheat—Sow, or better, drill in, *ff*, on well prepared ground. Provide for surface drainage by ample furrows, on all undrained fields.

Orchard and Nursery.

Gathering and marketing early apples and pears, and late peaches, is about the only occupation in the orchard this month. Dry fruit which will not keep, or preserve in bottles, especially the soft pears and peaches. See illustration of drying frames on page 277. In marketing pears and peaches let them be sent to the seller before they soften, or they will bruise and look badly. Peaches, especially, should be quite hard when picked, if to be marketed at a distance. All kinds of fruit will appear much better and bring higher prices for being carefully picked. See apparatus illustrated on page 273. Avoid the practice of "topping off" with the finest fruit.

Every thing about the commercial nursery grounds should be put in readiness for beginning the Fall business next month. Young trees should be well tended, plowing between the rows frequently to loosen the soil and keep down weeds. Unless sufficiently trimmed, give them their last pruning early this month, to preserve low branching trunks.

Labels—Provide early for Fall use.

Insects—Wash trunks of trees infested by scale with lye or potash water or strong soapsuds. Dig out or kill borers in the trunks of apple or peach trees.

Pits of peaches, plums and other stone fruits, also seeds of apples, pears, etc., as soon as cleaned should be placed in earth, or planted where wanted. They often fail to germinate when allowed to become dry.

Preserve a good supply of the early perishing fruits, such as peaches, plums, and soft pears, as heretofore recommended in the *Agriculturist*.

Seeds of trees and shrubs should be gathered as they ripen. Most of them will vegetate better by keeping them in boxes of earth until sowing time next Spring.

Kitchen and Fruit Garden.

As fast as the various plots are cleared of produce, all weeds and refuse should be gathered for the compost heap, and the ground be replanted with crops for early Spring use, or dug over and left in tidy condition. Draining and trenching are now in order, and if properly attended to, they will greatly aid in forwarding next season's crop.

Beans—Gather and shell as they ripen. Dry a good supply of unripe Limas for Winter use. String beans packed in salt will keep late in Winter; they are also excellent for pickling.

Blackberries—Cut out old canes and weak young shoots; leave one or two of the best for the next fruiting.

Cabbage and Cauliflower—Sow, *ff*, *m*, for late transplanting to cold frames. Keep late plantings well hoed.

Celery—Earth up in clear weather, and keep dirt from falling between the stalks.

Corn—Keep the earliest and best for seed. Cure the stalks for feeding out.

Cucumbers—Preserve the earliest and best for seed.

Grapes—Pick as they ripen. Leave those to be packed for Winter use until frost approaches.

Hops—Gather and dry, *ff*, *m*, and house the poles.

Melons—Save the best for seed. Lay boards under those ripening, and turn them occasionally.

Mushrooms—Make beds, *m*, *l*, as directed on page 274.

Onions—Pull and dry as they ripen. Sow seed, *f*, *m*, for early Spring use.

Parsley—Sow, *ff*, *m*, for use in Spring.

Raspberries—Follow directions of last month. Collect and house stakes for use next year.

Seeds—Gather best as they ripen, label and keep safe.

Spinage—Sow, *ff*, and thin out, *m*, *ll*, for Spring use.

Squashes—Gather as they ripen, and save seeds of best.

Strawberries—Transplant a good supply, *ff*, *m*.

Tomatoes—Preserve a full supply in bottles for Winter.

Turnips—Keep well hoed and properly thinned.

Winter Cherries—Gather as they ripen and preserve or pack them in cotton for Winter use.

Flower Garden and Lawn.

Many of the Summer plants are done flowering, and unless seeds are to be saved it is better to remove all the flower stalks. The ground can be filled with late bloomers, perennial seedlings, or Spring bulbs. It is important that no unoccupied spaces appear in the beds or borders.

House plants of tender sorts will need removing by the middle or end of the month. Everything should be in readiness as directed under Green and Hot-House.

Bulb Beds—Make and plant these, *m*, *l*. Any good garden soil will answer for bulbs. If wet, drain it, or raise the beds. A little sand, muck, and cow manure, well worked into the soil, if compact, fits it to receive the plants. Lay out a bed in any desired form—an oval or circle is a good shape—set crown imperials, hyacinths and tulips in the center, planting 3 to 4 inches deep, and 9 inches apart. Finish with narcissus, crocuses, and snowdrops, setting these last 3 inches apart and 1½ inches below to the crowns. Of course the outer circle should be of the lowest growing varieties, and all should be arranged with reference to the different colors. If sand is easily obtained, place a handful around and over each bulb at the time of setting. In selecting from a collection, choose those which are bright and firm, in preference to any which have begun to grow.

Crysanthemums will soon begin to flower. Keep well tied up and cut out the weak shoots, leaving but few stalks in a place.

Cuttings of propagating plants should be made as soon as the wood is mature. Insert in a light soil with plenty of peat and sand worked in, and cover with a hot-bed sash. They will soon root and may be potted for Winter.

Evergreens may be set, *f*, *m*, if the ground is moist, but we prefer Spring planting.

Dahlias—Keep well tied up. Cut off the withered blooms as soon as they fade.

Flower Pits and Houses—Construct, *m*, *ll*, for safely keeping tender varieties over Winter. See page 272.

Hedges—Shorten in the base, *ll*, and leave for Winter.

Lawn—Keep from leaves, and scatter a little seed on bare spots. Sow Winter rye, on ground prepared for a lawn, but which is not to be seeded until Spring. A thick growth of rye will look very well during Winter.

Seeds—Watch their ripening and collect before they are wasted on the ground. Mark each package with care. Mark with strings, the finest late blooms, the seed of which it is desirable to save.

Verbenas and Petunias layered last month, may now be divided and potted for Winter blooming.

Weeds—Allow none to disfigure the ground or to sow seeds for a future crop.

Green and Hot-Houses.

One of the first things to be done is to see that the houses are prepared to receive their Winter stock. If new ones are to be built, let them be put up, *ff*, *m*. See chapter on constructing houses page 272. Before the close of the month, many of the more tender plants will need bringing in. They should never be left out until chilled by cool weather. See that pots are clean and plants properly cut back and decayed leaves removed when set in Winter quarters. The houses should have abundance of air and sunlight for some time after being filled, or the change will affect the plants unfavorably. Collect a good stock of old turf, well rotted peat, sand, and manure for potting soil. Mix it early for it improves by age. Lay in a supply of pots of various sizes to be in readiness for shifting the plants.

Having cleansed and painted the houses, attended to the glazing, arranged the furnaces, and brought in the plants, setting them tastefully in their appropriate places, begin at once to increase the stock by putting in cuttings of the several varieties needed. Sow a few desirable annuals at the same time to increase the number of Winter plants. The Cape and other house bulbs should now be potted and arranged for growing. Some of the hardy Spring blooming sorts may also be potted, and set in a cool place to be brought forward as wanted.

Camellias should be repotted, *ff*. They are now beginning to grow and require frequent waterings. It is not too late to bud and inarch.

Fire heat may occasionally be needed in some apartments, *m*, to *l*, to expel dampness and warm the air.

Grapes—The treatment must be governed by the different stages of growth; give little water and abundance of air to those ripening, and frequent syringings to later sorts.

Potting—Most of the plants will need repotting when brought in, although they have been growing in pots during the Summer. They will do better with a change of soil, and quite likely they require more room. All of the large number of house plants set in the borders in the Spring, are to be potted now. They should be shaded after the operation and watered freely. Many of the plants will be benefited by cutting back.

Apiary in September.

Prepared by M. Quinby—by request.

Immediately after the failure of honey in the flowers—which will be in September in most places, look out and remove all colonies too feeble to defend themselves. They

are quite sure to be robbed by stronger ones, which thus get a bad habit, and will be induced to attack others. Late swarms which are strong enough to winter, but lack honey, should not be fed this month—as many recommend—unless they can be fed sufficiently to construct comb in which to store it, and rear considerable brood. Next month, the brood will mature, and leave the cells, and give room for several pounds of honey.....When two or three feeble colonies stand near together, and contain bees enough for a good colony, they may be united for a winter stock, if fed properly. To prevent quarreling, sprinkle with sugar water flavored with a few drops of peppermint, or other essence. Condemned colonies will have a little more honey if taken now, than if later; yet when all the brood is matured and out of the way, it it will be nicer. Stocks in which much foul brood has appeared, should be removed at once. It will not do to wait for such to mature all their brood, as they continue to rear *that* till cold weather, and in the mean time may get robbed, which would infect other hives with the disease. When cells of honey and dead brood are mixed together in the same comb, it is best disposed of by burying—the honey is unfit for use, very little wax can be made from it, and the bees should not be allowed to take a particle. Stocks of any age may be attacked, and hence all should be examined where the disease is prevalent. When a stock is diseased just enough to condemn it, yet not sufficiently to prevent it from being wintered, it may be kept, but some hive containing combs and a small quantity of honey, should be provided to which to transfer in the Spring. Honey taken from such hives, when it can be cut out free from the mixture of brood, is suitable for the table; it may be eaten with no bad effects. The inferior pieces may be strained. By scalding thoroughly, and skimming, it may be fed to the bees with safety.

Into which are thrown various useful or interesting Items, Replies to Questions, Extracts from Letters, Gleanings from other Journals, etc.

Ask Questions—Send Items.—An unlimited number of suggestive questions are always welcome to the *Agriculturist* "Drawer;" and especially is this the case in regard to items of experience and observation that furnish information or hints to others. We by no means claim to have time, or room, or ability, to answer every query, but this journal is in one sense a great "manufacturing storehouse," for receiving and "working up" the experiences and suggestions gathered from every quarter.

The Crop Reports on page 284, with the Market Review on page 283, will be found interesting this month.

That Hint to Agricultural Societies.—It may be well to remind the managers of Agricultural Societies of what was done by the Ozaukee County Society (Wis.), last Autumn. They subscribed for 100 copies of the *Agriculturist* at full rates, to be distributed as premiums to exhibitors. They of course received our premium of a Wheeler & Wilson Sewing Machine, which was exhibited and kept in operation at the fair, and sold at auction at the close, for almost half of what they paid us for the subscribers. It is not too late for other Societies to do the same thing this Fall.

What Rockland County Farmers Did.—Last Fall they made up in one town a club of subscribers for 100 copies of the *Agriculturist*, each one pledging a dollar if needed. They sent on the names and money early (or one of the club did so), and received the premium Sewing Machine. The Machine was put up at auction and sold for $41, which was deducted from the $100 to be raised, so that they were only assessed 59 cents each for the year's subscription, and received the seeds extra. The same thing *could* be done in a thousand places this year. Extra copies to all new new names coming in this month. See pages 282 and 288.

"Noticing" Advertisements.—A manufacturer writes that if we will give him a "notice," he will send a long advertisement, and "pay for both it and the notice." Well, friend, we don't *sell* "notices." If your advertisement is not a deceptive one, nor otherwise objectionable, it will be inserted at the regular price. If the interests of our readers seem to demand a "notice," and it is convenient, we may give one, but it must be just as we think. A firm sent us a barrel of a new kind of potatoes asking us to "try and report by notice." We did so, and they have never forgiven us. We are sorry, but we did just as they requested. They certainly could not expect that a barrel of potatoes would buy a favorable report if the facts did not warrant it.

New Agr. Supt. of the Patent Office.—We learn by telegraph from Washington, that Dr. Locke has just been appointed Paymaster in the Army, and that Mr. Isaac Newton, of Delaware Co., Pa., has been appointed to the superintendency of the Agricultural Division of the Patent Office. We are sorry to lose Dr. L., as from a recent visit to the Department at Washington, we had come to hope for a decided improvement over the old regime. But for aught we know, Mr. Newton may be the right man in the right place. He has a fine field open before him

Flax Cotton—$500 Premium.—We announced last month, page 251, a premium of $30 offered by the Rhode Island Society for the Encouragement of Domestic Industry, for a bale of the best prepared Flax Cotton, not less than 50 lbs. We are glad to learn that some public spirited persons placed funds at the disposal of the Society, so that the offer is now increased to $500 instead of $30. The offer is not confined to the State. The Exhibition is to take place at Providence, Sept. 11. Further information may be had by addressing the Secretary of the Society, W. R. Staples, Providence.

Sowing Grass Seed Thickly.—An aged farmer of Pennsylvania, in a letter to the *American Agriculturist*, says: "....After nearly fifty years of experience and observation, among my neighbors and elsewhere, I am convinced that too little grass seed is sown. Here I see a field with only half plants enough growing; would not a double quantity of seed have filled up the gaps? The cost of the seed was 60 cents per acre. Another 60 cents worth of seed would have made this year's mowing and pasturage worth $12 an acre, while it is now worth only $6. I never saw grass too thick; but I have seen it too thin on hundreds of fields....Formerly I sowed 4 quarts of clover seed and 8 quarts of timothy seed to the acre; now I never sow less than 8 or 10 quarts of clover, and 14 to 18 quarts of timothy, and since doing this I have had no failure, but generally a heavy mat of fine grass...."

Sweet Scented Clover (*Melilotus alba*).—James Wolverton, of Schuyler Co., N. Y., sent us last Spring some seed which he called "California Clover Seed, considered quite a novelty." On growing, it proves to be the Melilotus *alba*, or sweet scented clover. It is very common in Europe, and in many parts of this country. The seed is kept at all large seed stores. It grows 4 to 5 feet high, very branching, perennial, and is sometimes used for fodder when small. It yields a fragrant odor long after drying. The seed is used in Switzerland for flavoring cheese.

Size of a Bushel Box.—An Oregon subscriber of the *Agriculturist* asks how to get up a bushel measure. If he can not buy a cheap, correct bushel measure, he can easily make a bushel or half bushel *box*. Our standard bushel contains 2150⅖ cubic inches, (or to be very accurate 2150, 42-100th inches). Make the box so that its three dimensions in inches, multiplied together, shall just equal 2150⅖. Thus if it be 10 inches square it will need to be 21⅖ inches high. If a foot square, then very nearly 15 inches high (accurately 14.934-1000 inches). A convenient half bushel box is one a foot square and 7⅕ inches high. A bushel lacks only 10 cubic inches, or one-third of a gill, of being 1¼ cubic feet. (The above is the old Winchester bushel, the standard in this country. The present Imperial bushel of Great Britain contains 2218 1-5 inches, or accurately 2218 192-1000ths inches; and 33 of our bushels equal 32 Imperial bushels.)

Measuring Unshelled Corn in the Crib.—Allowing the old rule of two bushels of ears for one of shelled corn, multiply together the length, breadth, and hight of the corn in feet. Multiply this by 2 and divide it by 5, for the bushels of shelled corn; or what is the same thing, multiply by 4 and cut off the right hand figure. *Example.*—A bin is 4 feet wide, 5 feet high, and 15 feet long. These multiplied together give 300 feet. Multiplying by 4 gives 1200 feet; and cutting off the right hand figure leaves 120 bushels of shelled corn, or 240 bushels of ears. This last is within one bushel of the exact grain measure, which is 241 bushels.

"Raw Bone Superphosphate."—Our readers are doubtless aware that while we have attatched little value to superphosphate as commonly made, (of burned or sugar house bones) we have always regarded a solution of *raw bones* in sulphuric acid, as useful for most if not for all crops. We are glad to see an article thus made advertised in this paper, by Messrs. Lister & Brother, and also by Messrs. Baugh & Son. Those who have to buy fertilizers of any kind, may do well to experiment with it upon their Winter grain.

Spontaneous Combustion in a Hay Mow.—Chas. W. Haight, Westchester Co., N. Y. We have heard of such an occurrence, but have never known of a *well authenticated* case. A cloth dipped in oil and left to heat will sometimes take fire; so will oil and shavings; and oil spilled on hay or straw might produce a fire; but simple moisture we think would fail to do so.

The Great Sale of Hereford Cattle.—The large stock of Hereford Cattle bred by the late Lord Berwick, numbering about 300 head, will be sold at auction on the 17th and 18th of September, at Cronkhill, near Shrewsbury, England.

The Oldest Horse on Record.—Wilkes' Spirit of the Times speaks of a small black Galloway horse 11 hands high which died in 1789, near Haddonfield, Scotland, at the advanced age of *sixty nine years*. Only a few weeks before his death he trotted for several hours, at the rate of 7 or 8 miles per hour.

Tomato Wine.—Miles Barnes, Clinton Co., Pa.—We have had no experience in making wine from tomato juice, but should proceed as directed for blackberries on page 247 (August No.). One item, however, should be added to that recipe; after the fermentation has ceased, cork the jugs or bottles tightly.

Transplanting Budded Trees.—These should not be set out until the new bud has made at least one year's growth. A few may live if transplanted in the Fall or succeeding Spring, after budding; but more will die, or make but a weak growth at best.

Coal Ashes—Borers—Cranberries, etc.—Jas. Slaven, Morgan Co., Mo. Notes on all these subjects containing the information asked for, have been given in the former numbers of the present year; and we can not so soon repeat them.

Russia Bass Matting.—Bass mattings as explained on page 135, May No., is the inner bark of the Linden or Basswood tree, and is very convenient for tying up vines and plants, as it is strong and yet so soft as not to cut into the plants like round hard twine. It comes in the form of mats to be pulled in pieces for use, and is largely employed by nurserymen in budding young trees. The Russia mats advertised on another page, by D. W. Manwaring, are excellent, as we have proved.

Tar Water for the Onion Maggot.—A writer in the New-Hampshire Journal of Agriculture says he has found tar water a sure remedy for the Onion maggot. (*Anthomyia ceparum*). The mixture should be strong, and applied to the rows night and morning a few times, or until the maggots leave.

Copperas as a Disinfectant.—"Old Subscriber," Reading, Mass. A strong solution of copperas in water, say a pound to three gallons of water, will generally remove offensive odors from a sink or privy.

Mercurial Barometer.—We have received samples of the Mercurial Barometers made by Chas. Wilde, (advertised in this paper). They are well made, strong, and appear to be really fine instruments.

Condensed Coffee.—Gail Borden, in addition to his condensed meat and condensed milk, which are now extensively used, has commenced the manufacture of a condensed preparation of coffee, with milk and sugar added, so that it is only necessary to stir a teaspoonful of it in a cup of hot water, to produce an excellent dish of coffee. He intends to continue experimenting until a cup of tea or chocolate can be made in the same manner.

Evaporator's for Chinese Sugar Cane.—To several inquirers. From what we have seen, and from all we can learn, we think Cook's Portable Sugar Evaporator is an excellent apparatus for boiling down not only cane juice but Maple sap. The card of the manufacturers will be found in our advertising columns.

An English Farmer's Prescription.—Feed the land before it is hungry; rest it before it is weary; and weed it before it is foul.

Value of Land near London.—We notice the recent sale of a plot of 163½ acres of land in the Parish of Kingston, some 20 miles from London. It is described as "lying in a ring fence, tithe free, and land tax redeemed"—that is, it is surrounded by an outside fence instead of a hedge; is not subject to the church tax of a tenth; and the annual taxes are commuted for by a certain sum paid in advance. The purchaser, John G. Waite, the well known Seedsman, of 181 High Holborn, London, paid $75,000 for it, or about $460 an acre in July last, and was soon after offered an advance of one third. We are glad to hear of the success of our friend Waite, who by the way, is the agent and representative of the *Agriculturist*, in Great Britain.

The "Return Table Apple Parer" is a new invention which we have tried, and find to be fully equal to any thing we have previously had in use. It costs 75 Cents or $7,50 per dozen; will probably be advertised.

Hog Cholera.—We have received a treatise read before the Rhode Island Medical Society, in which the author, Edwin M. Snow, M. D., gives the result of careful post mortem examinations and other information gathered from a study of the matter. He decides it to be of an epidemic nature, depending upon some unknown cause in the atmosphere, which becomes active in inducing the disease when animals are found in the right conditions to receive it. These conditions he names as impure air arising from filth, and particularly from crowded pens, combined with unhealthy food and the want of pure water: all of which may easily be remedied, and the animals thus be kept from taking the infection. He thinks that no treatment is of any value, when a hog is attacked. Prevention alone is recommended. He also advances the opinion that "pleuro pneumonia" in cattle is of the same nature, if not the same disease, varied by the nature of the animal affected.

Water of Boiled Potatoes for Hogs.—Wisconsin Subscriber. We do not think there is much foundation for the very common belief that the water in which potatoes are boiled is injurious to animals; but unless the potatoes are boiled so as to mash, or break open the skins, the cooking water will contain little or no nourishment, and it is better to throw it away. If the skins burst open much, considerable starchy material will dissolve in the water, and it will then be worth using with other food.

Killing Toads and Bloody Milk.—What boy has not been told that if he throws stones at toads and frogs, the cows will give bloody milk? It will do no harm if all the boys in the land believe the story, unless it operates upon them generally as it did upon a boy about our own size and age, who had an undue share of curiosity in his composition. He would not have thought of hurting the toads, but for an irresistible desire to investigate the "scientific accuracy" of the report, and so he sometimes stoned the toads, in hopes of seeing how a pailful of bloody milk would look.——The editor of the N. E. Farmer, makes a very neat response to an inquirer who asks his opinion. He says; "Yes—we believe in it, in this way—and in no other. Any person who will throw clubs and stones at toads, frogs, and other useful creatures, and wantonly murder them, will be quite likely so to abuse his cows as to make them give bloody milk."—So thinks the *American Agriculturist*.

Bees in War.—A good story is told of the attack of a band of Indians during the Revolutionary war, upon a block house on the Mohawk river, N. Y., occupied by a farmer, his wife, and two boys. The house was strong and could not be easily entered. The wife and boys loaded the rifle and two shot guns, and the man killed several Indians, but finally had his arm broken by a ball through the port hole. The boys kept firing the guns as fast as they could, but the Indians went to a closed side of the house and commenced digging under the walls. A swarm of bees had been removed to the chamber for safety, and the mother took this hive to an upper window, and pitched it out, the bottom falling off, and letting the whole swarm out upon the marauders. Their stings were too much for the Indians, and believing from the continued firing that the house was still well occupied, they took to their heels.

Selecting Seed Corn.—Henry Gaylord, Cheshire Co., Conn., inquires whether the upper or lower ear of a stalk bearing two equal ears, would be most likely to give the best produce. The upper ear is usually the best developed, and we should therefore generally prefer it. Has any *Agriculturist* reader experimented in the matter?

Spring Wheat.—A sample of very fine Spring wheat, called the "Mammoth Long Bearded," has been shown us by Thos. Carpenter, of Westchester Co., N. Y. The heads are 5 and 6 inches long, well filled with a large plump berry. It was sown early in May, and promises to yield 25 to 30 bushels per acre.

Wheat from Illinois.—Nameless variety received last Spring from J. M. Jackson, Winnebago Co. Seed rather shrunken. Sown April 15, on good warm soil; harvested July 30. Yield small; it was too dry to allow of tillering much, if indeed any Winter wheat sown in Spring, will tiller well. The crop is of better quality, than the seed. The kernel resembles the Red Mediterranean, if it be not the same. The beard was spotted, like mildew, and not blue or black as described by Mr. Jackson.

Irish Oats.—Seed from J. Headings, Lawrence Co., Pa., said to weigh 45 lbs. to bushel, and yield 50 to 60 bushels to acre, and to require poor soil to prevent lodging. The small parcel received did not produce enough to try the weight of a bushel. Sown April 15; grew four feet high, with strong stalks, and large heavy heads. Ripe July 28. Kernels large and heavy. Promises well.

Early Potatoes. — Early Sovereign Potatoes, are on our Exhibition Table which were dug the last of June, from potatoes planted April 27.

Peas from Michigan.—Two parcels from H. B. Hubbard, Saginaw Co., Mich. Planted April 15; cooked July 22. Resemble the old Marrowfat we used to grow at the West; haulm 4 feet high; yield freely; flavor above medium, preferable to the "Great Eastern," with which they were compared.

The Largest Apple Tree in America (?)—A correspondent of the Louisville Journal, claims that the largest apple-tree in America is growing upon the farm of Thomas K. Adams, in Rockcastle Co., Ky. It was planted in the year 1800 by Wm. Canifax, and now measures 15 feet around the trunk above the ground, and at the hight of four feet is 12 feet in circumference. It forks at the hight of five feet, one branch measuring 7½ feet, and the other 5 feet, 5 inches in circumference. The branches are said to extend 65 feet *each way* from the trunk (?) "The fruit is of excellent quality, resembling the Queen Apple; it keeps well in Winter."——This is a pretty large statement, especially in regard to the diameter of the top—130 feet across, or 400 feet around it! though we are not prepared to question its accuracy. There are plenty of apple trees much older than 61 years. If any one knows of a larger tree, or one almost as large, will he please send the accurate figures to the *American Agriculturist*, to be recorded?

Low Branching Apple Trees.—J. T. Moxley, Sheboygan Co., Wis., says the best trees in his orchard, branch at the ground. He raised the trees from seed and afterwards grafted them. He proposes to start a nursery, by planting the trees as far apart as hills of corn, allowing them to branch near the ground. This will take a large amount of room. It will answer very well to set them in rows 4 feet apart, and 1½ to 2 feet from each other in the row.

Early Decay of Apple Trees.—J. W. Freley, Windsor Co., Vt. The black spots on the bark of your young trees, mostly on the south side, were probably caused by the freezing and thawing of the sap, which ruptured the sap vessels. A warm spell in Winter starts the sap on the sunny side, and a sudden severe freezing, aided somewhat by a hot sun in the Summer, does the mischief. The remedy is, to let the trees *branch low* as a partial protection. Another plan is to bind the trunks with cloth or even a few thicknesses of strong paper, during the freezing season.

Manzanito Shrub.—Mr. H. S. Senter, of Mercer Co., Ill., who has had ample facilities for observing this shrub near the head waters of the American River, Deer Creek, the forks of the Yuba River, and the Feather River, California, confirms Mrs. Bowman's statement in the August *Agriculturist*, page 241, with the exception that he found it in *all* the above localities, and almost on the summit of the Sierra Nevada mountains, among lofty trees, and on good soil as well as on the scrubby pine slopes. He thinks it must be hardy, and if our nurserymen had it for sale, many returned Californians at least would early secure one. The beautiful red berries are eaten by whites as well as Indians. We shall be glad to receive seeds from some of our California readers.

Cutting Timber.—The Maine Farmer says, better pay one-half more to have timber cut in Summer than in Winter. The editor states that he has rails on his fences which were split a few years ago. Those cut late in Winter, or Spring, have become nearly worthless by decay, while those cut in mid-summer, dried thoroughly, and are hard and sound. (See article on page 270 of this paper.)

Grapes in Dwellings.—D. D. Cotto, Montgomery Co., O. Foreign grapes will not succeed well in the dry atmosphere of a living-room, unless the foliage be often cleansed and sprinkled. Grape leaves delight in an abundance of moisture from dews and rains. This is supplied in a grape house by syringing and sprinkling the floors, exposing water in tanks or evaporating pans, etc.

How far apart to Plant Grapes.—P. P. Wiggins, Kendall Co., Ill. Cultivators are not agreed upon this point. We would advise planting Concord, Isabella, and other strong growers, 8 feet apart, if to be trained as you propose, upon the renewal system, from horizontal laterals as shown on page 241, August *Agriculturist*. This will give two bearing and two new shoots, one foot apart, on each side of the main stem.

Large Grape Leaf.—Rev. C. A. Hay, Dauphin Co., Pa., sends to the *Agriculturist* office a leaf of the Oporto grape vine, 16½ inches wide and 18 inches long. It grew in the open ground.

Refuse Lime from Kilns—Strawberries.—T. J. Naphens, Tippecanoe Co., Ind. The refuse lime from a kiln—the air-slaked we suppose you mean—has considerable value, though not equal to fresh, water-slaked, unless there are ashes enough to make it as good or better. On your six inches of black loam it will doubtless be useful in preparing it for strawberries, especially as there is yellow clay subsoil, which should be loosened a foot or more deep and a little of it mixed with the surface soil, if the latter be light. The amount of lime must depend upon the damp or sour character of the surface soil, and the poisonous character of the yellow earth below. Autumn is the very best time to subsoil; the frosts of Winter will then benefit the loosened soil.

Late Strawberries.—Subsequent to our note last month, we saw a lot of the Austin Seedling in market July 22, long after all other sorts had disappeared.

Everbearing Raspberries.—Amos Heater, Mason Co., Ill. Many of the so-called "everbearing" raspberry plants, are almost *never* bearing—at least they yield too little fruit to be of much value. We prefer a *full crop* of any fruit in its season, to a few late dribblings.

Wild Fruits in Iowa.—J. W. Smith, M. D., Floyd Co., Iowa, sends to the *American Agriculturist*, specimens of wild currants. They are common in parts of N. England, and are not considered valuable. He says that wild gooseberries, plums, crab apples, black and red raspberries abound, from which he very properly concludes that cultivated fruit will succeed in that locality.

Cahoon's Rhubarb.—D. Smith, Bristol Co., Mass. This variety is of mammoth size, but is devoid of the fine flavor found in the Linnæus. It is at best only adapted for wine making. The Illinois State Horticultural Society, within whose limits it originated, have most emphatically declared it "worthless."

Helichrysum, or Fadeless Flower.—Among a choice collection of seeds presented to us last Spring by Mr. H. B. Lum, of Sandusky, Ohio, was a package of Helichrysum, mixed varieties. It is called Immortelles in France, and the Golden Sun, or Straw Flower (Strohblume) in Germany. The flowers cut when in full bloom, retain their form and color for years, closing in damp and opening in dry weather. Worked in wreaths and placed upon graves, they present a beautiful show in the dead of Winter. They are used very generally for this purpose in Europe, and we have seen a few of them in Greenwood Cemetery. They are also beautiful in permanent wreaths and bouquets for the house. This plant is of very easy culture, and should be much more widely introduced.

Lupinus Nanus.—A beautiful wild flower from California. Seed received from Wm. L. Dunkun, Yula Co. A choice annual, of dwarf habit; spikes of azure blue flowers, tinged with white; leaves like the wild lupine, a little hairy; stem branching, 16 to 18 inches high. Our seed sown April 10, was in bloom July 16. Mr. D. says it grows best on high land. It produces with us a succession of abundant flowers. The comparative scarcity of fine blue flowers, as well as the intrinsic beauty of this plant, makes it a valuable addition to the garden. We would be glad to obtain a supply of seed for distribution.

Poppy—Pink—Commelyna (*cæleste*).—Seeds of each received from J. S. Whitlock, Washtenaw Co., Mich. The poppy (*Papaver Somniferum*) proved very fine and double, but was not fringed as described.—The Pink (*Dianthus carthusianorum*) resembled the Chinese pink (*Dianthus Chinensis*), but with colors less variegated. The Commelyna cœleste seed we are sorry to say did not grow; from the description it must be desirable, as are all long blooming blue flowers.

Soap Weed (?)—From Yula County, Cal., Mr. Wm. L. Dunkum, sends us some seeds of new plants, including one called there the "Soap Weed" which grows spontaneously in every variety of soil and location. It is a bulbous plant, and appears to be biennial or perennial. Not having flowered with us as yet, we can not classify or name it, and can find no description in botanical works which corresponds to it. The root is like the wild onion, and the leaf resembles the small leafed Iris. Mr. D. says it is held in repute as an excellent remedy for "Poison Oak," and all eruptions of the skin, and particularly for inflamed eyes. The root is bruised, then stirred with a little water until it forms a lather very like soap suds. This is used as a wash for the afflicted skin or eyes. Can Prof. Thurber, of Mich. Agr. College, name this plant for us? It appears to be an entirely new plant, not yet known to the Botanical or Medical world.

Successful Draining.—James V. Edeleu sends a detailed account for which we have not room, of the successful draining of a swamp, with ditches partly filled with cord-wood, covered with coarse hay, sods, and earth. He says the work was undertaken in consequence of articles on the subject in the *American Agriculturist*.

Free Seeds for 1862 — An Unusually Large Distribution.

We take great pleasure in announcing, at this early day, that owing to several favoring circumstances, we shall be able to present to our readers the coming Winter, a large assortment of Field, Garden, and Flower Seeds, both of standard and new varieties, and *in much larger parcels than ever before.* The new postage law will greatly facilitate the forwarding of seeds at a cheap rate, to all parts of the country. Last Winter the postage was 6 cents per ounce, or 96 cents per pound, on the shortest routes; now it is but 1 cent per ounce, or 16 cents per pound. Then it cost 20 cents an ounce, or $3.20 a pound! both to the Pacific Coast and to the British Provinces; now it costs but 2 cents per ounce, or 32 cents for a full pound, to the Pacific, and but half of these rates to the Canadas. This will be a great saving of expense, and enable our distant readers to get large parcels of good and choice seeds at very little cost.

Again, we are ourselves growing a dozen times the quantity of seed this year that we have ever before been able to produce; while the good season in Europe, and the large production and less demand in this country (owing to loss of the usual Southern market), will enable us to purchase at wholesale, for the same money, much larger supplies than hitherto. We are therefore safe in promising to our readers a quantity of seeds for the next season, that will far surpass in value anything that we have been able to do in the past.

These seeds will, of course, be *free* to all our subscribers for the next volume. The list will be announced at the earliest date that we can get them collected—certainly by January, and we hope in December or November. Our facilities for collecting and distributing seeds are unsurpassed, and we shall be able to send out, as a gratuity, a quantity that will often be worth to the recipient one-fourth to one-half of his subscription, and not unfrequently worth more than the entire cost of the paper for a year.

Present Prospects of Farmers.

The transactions in the New-York Breadstuff Market, since the last *Agriculturist* went to press, and the latest news from Europe, are of the highest interest to farmers. The sales of flour, wheat, and corn, mainly for export, have been immense. During a single day (Aug. 15) the sales of flour and wheat in this city, alone, were equal to *half a million bushels of wheat!* The prices of wheat and flour have gone up *five* to *fifteen per cent* within two weeks! In our issues for months past, we have insisted that not only was there a large deficit in the *last* wheat crop of Great Britain, involving a heavy demand upon this country, but that the incoming crop must be short. It could not be otherwise, with the poor seed used, and the continuous rains all through the sowing season last Autumn. At the date of our last report, news of favorable weather had just arrived from Europe, and speculators had managed to inculcate the belief that the harvest would be good, and as a consequence of this belief, our markets sunk to a low point, for, with a surplus of grain here, the prices must necessarily be governed in a large measure, by the immediate or prospective foreign demand.

The positive advices received here since the 10th of August, settle the question beyond a doubt, that the crops just gathered, or being gathered, *have been short, both in Great Britain and France* and in some other countries of the Continent, and that large exports from this country will continue for another year, unless there should be an entirely unlooked for interruption of friendly relations.

From a careful survey of the numerous reports from all parts of our own wheat growing States, we conclude that, taken as a whole, the crop now gathered will be above an average one. This will afford a supply for home use, and a moderate surplus for export—not enough to overstock the market, or keep prices very low.

The war caused a depreciation in the Southern State Stocks, so largely used as bank securities at the West, and this, of course, depreciated the bank bills. The depreciation went so far as to nearly destroy the bank issues in all the States west of Indiana, except Iowa, and the result was, that for several months there was no money afloat, either to pay debts or to buy grain. Latterly, large amounts of gold have been forwarded from the East, which is beginning to find its way into the Western country. The constant demand for breadstuffs for Eastern consumption, and for export, will tend to greatly increase the circulation of gold and specie-paying bank bills among the masses at the West. The immense sums now being expended *at home* by our General Government, are beginning to set money afloat. The Treasury Notes, of which a million dollars a day are now provided for, and are being issued, will, during the continuance of the war, add greatly to the sound circulating currency of the country, and money will soon be plentiful, at least among those who produce the necessities of life—breadstuffs and meat. People must eat, and there are *about* as many mouths to be fed in war as in peace. Those who have crops to sell will therefore find a market for them; and as for breadstuffs, the foreign demand and the abundance of money, will keep the prices up to a paying figure, at least.

The expenses of the war are immense, but they are largely charged to the future, in the form of government loans, to be gradually liquidated over a long series of years; and, unlike all foreign wars, the money expended is not going out of the country. On the other hand, we are importing little foreign merchandise to be paid for, while we are constantly receiving large amounts of hard coin from abroad in return for the surplus products of our fertile soils. It would seem as if an over-ruling Providence had so ordered the seasons and the course of events, as to prepare us for the great contest in which we are now engaged for constitutional freedom and the final establishment of our government on a firm, permanent basis.

There is some anxiety in regard to the system of direct taxation established, but this is needless. The amount to be raised annually, averages less than two dollars for each inhabitant of the Free States. It will fall heaviest upon those best able to meet it; and very few persons would hesitate to voluntarily subscribe this amount, to support and maintain a free government, to the influence of which we are so largely indebted for the prosperity we have enjoyed.

To the cultivators of the soil the present state of the country presents the strongest incentives to exertion. Their products will be in demand, however much all other commodities may be depreciated. He who fails, through fear, or sluggishness, to put in every acre of wheat possible, and to increase the products of his acres to the highest point, fails in his duty to himself, to his family, and to his country. There is every motive to increased exertion, and to a careful study of the best methods of cultivation. If all other incentives fail, the certain prospect of full returns for the products of the soil, will surely stimulate to active and *well directed* labor.

Nepaul Barley—Giant Rye.

Last Winter we received two parcels of seed from Jno. S. Graham, of Calaveras Co., Cal., accompanied by the following note: "I send you a few seeds of what is here called Nepal (Nepaul) Barley. It may be on the Atlantic side, but I have seen no account of it.——Last season I drilled in one ounce on 147 square feet and it yielded 16¼ pounds of clean grain, or at the rate of 92 bushels per acre. It has a unique appearance when heading out; the heads are six rowed and beardless....The gigantic rye enclosed is believed to be particularly adapted for making vermicelli. It may be what is called "Polish Wheat" at the East, though not known by that name here. It grows 6 feet high, and yields well.. .."—The above seed we sowed April 15. The barley seed received was a splendid grain—very large, heavy, clear skinned, in brief, the finest specimen we ever saw. It grew about three feet high, and bloomed. The accompanying sketch presents the exact appearance of a head in bloom. It had a few short spikes or dwarfed blunt beards, as shown in the cut. Being on dry sandy soil, and the drouth excessive, the kernels did not fill well enough to equal the seed sown. This is the first specimen we have seen, though we believe some seed was distributed from the Patent Office a few years ago. If it did well, we ought to have heard more of it ere this. From our small experiment under unfavorable circumstances, and from Mr. Graham's account, we should judge that this grain would be a decided acquisition, at least in some parts of the country where it may be found to flourish well. The "*Gigantic Rye*" received, was also very fine, literally a gigantic kernel, as light colored and clear skinned as good wheat. Being sown in Spring, and suffering from the drouth, it did not attain a hight of more than four feet, and the kernels were shrunken. What it would do if sown in Autumn and under favorable circumstances, we can not tell; it appears to promise well, and we shall be glad to receive a larger parcel to sow this Fall.

According to the Farmers' Magazine, 7,452 *tuns* or over *fifteen million* (15,000,000) *pounds* of cheese were exported from the United States, from Sept. 1st, 1859, to Sept. 1st, 1860.

Agricultural Exhibitions for 1861.

[The following list gives the time and place of all the State and County Fairs reported up to the date of going to press. The "*National Fast Day*," which all will desire to observe, will interfere with those appointed for Sept. 26, and some *immediate* action should be taken to change the time to another week, or to open a day or two earlier, or a day later. Our own (Queens) County fair has been changed to Oct. 3.]

STATE FAIRS.

Name.	*Where held.*	*Date.*
Milwaukee	Milwaukee, Wis.	Sept. 2— 6
National Horse Show	Ottawa, Ill	" 3— 6
Illinois	Chicago	" 9—14
Ohio	Dayton	" 10—13
Vermont	Rutland	" 10—13
California	Sacramento	" 16—21
New-York	Watertown	" 17—20
Kentucky	Louisville	" 17—21
Wisconsin	Madison	" 23—27
Canada West	London	" 24—27
Iowa	Iowa City	" 24—27
Michigan	Detroit	" 24—27
Minnesota	St. Paul	" 24—27
Oregon	Oregon City	Oct. 1— 4

COUNTY FAIRS.

MAINE.

Oxford West	Fryeburg	Oct. 8—10
Kennebec	Readfield	" 9—10

NEW-HAMPSHIRE.

Cheshire	Keene	Sept. 24—25
Hillsboro'	Milford	" 25—26

VERMONT.

Rutland	Rutland	Oct. 2— 3

MASSACHUSETTS.

Middlesex, North	Lowell	Sept. 12—
Highland	Middlefield	" 12—
Middlesex South	Framingham	" 17—
Hoosic Valley	North Adams	" 17—
Hampden East	Palmer	" 17—
Middlesex	Concord	" 19—
Worcester	Worcester	" 19—
Essex	South Danvers	" 24—
Worcester North	Fitchburg	" 24—
Housatonic	Great Barrington	" 25—
Franklin	Greenfield	" 26—
Norfolk	Dedham	" 26—
Worcester West	Barre	" 26—
Berkshire	Pittsfield	Oct. 1—
Bristol	Taunton	" 1—
Hampden	Springfield	" 1—
Plymouth	Bridgewater	" 3— 4
Worcester South	Sturbridge	" 3—
Hampshire, Hampden and Franklin	Northampton	" 3—
Barnstable	Barnstable	" 8—
Worcester South East	Milford	" 8—
Nantucket	Nantucket	" 10—11
Hampshire	Amherst	" 10—
Martha's Vineyard	West Tisbury	" 15—

CONNECTICUT.

Fairfield	Bridgeport	Sept. 17—20
Housatonic	New Milford	" 25—27

NEW-YORK.

Rensselaer	Lansingburgh	Sept. 2— 6
Saratoga	Saratoga Springs	" 3— 6
Oneida	Rome	" 9—12
Broome	Binghamton	" 10—12
Oswego	Mexico	" 10—12
Chenango	Norwich	" 10—12
Cortland	Homer	" 11—13
Chautauqua	Jamestown	" 17—19
Brooklyn Hort. Soc.	Brooklyn	" 18—20
Delaware	Hobart	" 18—20
Oxford (Chenango Co)	Oxford	" 23—25
Putnam	Carmel	" 24—26
Westchester	Mount Vernon	" 24—26
St. Lawrence	Canton	" 25—27
Ulster	Kingston	" 25—27
Albany	Albany	Oct. 1— 4
Queens	Flushing	" 3—

TOWN.

Smithville	Smithville (Chenango Co.)	Sept. 5— 6
Union	Medina (Orleans Co.)	" 12—13
Union	Deposit (Delaware Co.)	" 18—19
Virgil	Virgil (Cortland Co.)	" 19—21
Brookfield	Clarkville (Madison Co.)	" 24—25
Union	Trumansburg (Tomp. Co.)	" 25—27
Brockport	Brockport (Monroe Co.)	Oct. 1— 2
Wilson	Wilson (Niagara Co.)	" 9—10

PENNSYLVANIA.

Mercer	Mercer	Sept. 17—19
Florence	Florence (Wash. Co.)	" 18—19
Luzerne	Waverley	" 24—26
Clearfield	Clearfield	Oct. 15—17
Columbia	Bloomsburg	" 17—19

CALIFORNIA.

Tehama	Red Bluff	Sept. 11—
Sonoma	Santa Rosa	" 24—27

OREGON.

Marion	Salem	Sept. 11—12
Yamhill	McMinnville	" 24—25
Lane	Eugene City	Oct. 9—10
Washington	Hillsborough	" 16—17

OHIO.

Brown	Georgetown	Sept. 3— 6
Franklin	Columbus	" 3— 6
Ashtabula	Jefferson	" 4— 6
Madison	London	" 4— 6
Clermont	Olive Branch	" 4— 6
Clinton	Wilmington	" 4— 6
Clermont	Bantam	" 10—13
Geauga	Burton	" 17—19
Portage	Ravenna	" 18—19
Crawford	Bucyrus	" 18—20
Guernsey	Cambridge	" 18—20
Lake	Painesville	" 19—21
Tuscarawas	Canal Dover	" 22—24
Geauga (free)	Claridon	" 24—26
Morgan	McConnellsville	" 24—26
Trumbull	Warren	" 24—26
Miami	Piqua	" 24—27
Knox	Mount Vernon	" 25—27
Lorain	Elyria	" 25—27
Seneca	Tiffin	" 25—27
Pickaway	Circleville	" 25—27
Jefferson	Steubenville	" 25—27
Columbiana	New Lisbon	" 25—27
Allen	Lima	" 26—28
Hancock	Findlay	" 26—28
Richland	Mansfield	Oct. 1— 3
Summit	Akron	" 1— 3
Mahoning	Canfield	" 1— 3
Coshocton	Coshocton	" 1— 3
Carroll	Carrollton	" 1— 3
Wayne	Wooster	" 1— 3
Shelby	Sidney	" 1— 4
Clark	Springfield	" 1— 4
Champaign	Urbana	" 1— 4
Butler	Hamiltion	" 1— 4
Sandusky	Fremont	" 2— 4
Hardin	Kenton	" 2— 4
Defiance	Defiance	" 2— 4
Stark	Canton	" 2— 4
Harrison	Cadiz	" 2— 4
Huron	Norwalk	" 2— 4
Morrow	Mount Gilead	" 2— 4
Greene	Xenia	" 8—10

MICHIGAN.

Berrien North	St. Josephs	Sept. 18—20
Washtenaw	Ann Arbor	" 18—20
Ottawa	Lamont	" 19—20
Lapeer	Lapeer	" 24—26
Jackson	Jackson	" 25—27
Macomb	Romeo	Oct. 2— 4
Iona	Iona	" 2— 4
Kent	Grand Rapids	" 2— 4
Calhoun	Marshall	" 8—10

WISCONSIN.

Bad Ax	Viroqua	Sept. 9—11
Racine	Union Grove	" 17—19
Jefferson	Lake Mills	" 18—19
Winnebago	Oshkosh	" 18—19
Richland	Richland Centre	" 21—22
Dodge	Mantorville	" 24—25
Lafayette	Darlington	" 25—26

IOWA.

Dubuque	Dubuque	Sept. 4— 6
Crawford	Dennison	" 12—13
Black Hawk	Waterloo	" 12—13
Mahaska	Oscaloosa	" 17—18
Washington	Washington	" 17—19
Pottawattomie	Council Bluffs	" 18—19
Union (Scott, Cedar, Jones and Jackson Co.'s)	Wheatland, (Clinton Co.)	" 18—20
Jackson	Andrew	" 18—20
Page	Clarinda	" 19—20
Linn	Cedar Rapids	" 24—26
Chickasaw	New Hampton	" 25—26
Cerro Gordo	Mason City	" 25—27
Montgomery	Frankfort	Oct. 1—
Marion	Knoxville	" 1— 3
Benton	Vinton	" 2— 3
Guthrie	Guthrie Center	" 2— 3
Jones	Anamosa	" 2— 4
Bremer	Waverley	" 3— 4
Wayne	Corydon	" 4— 5
Davis	Bloomfield	" 4— 5
Johnson	Iowa City	" 5— 6
Harrison	Magnolia	" 9—10
Tama	Toledo	" 9—10
Van Buren	Keosauqua	" 10—11
Marshall	Marshall	" 11—12
Crawford	Dennison	" 12—13
Hamilton	Webster City	" 17—18

INDIANA.

Switzerland and O	Enterprise	Sept. 17—20

KENTUCKY.

Breckenridge	Cloverport	Oct. 1— 5

KANSAS.

Douglas	——	Sept. 8— 9

ILLINOIS.

Cass	Virginia	Aug. 27—29
Morgan	Jacksonville	Sept. 3— 6
Peoria	Peoria	" 3— 6
Henry	Cambridge	" 4— 6
Warren	Monmouth	" 4— 6
Macon	Decatur	" 16—20
Winnebago	Rockford	" 17—20
Union	Warren	" 17—20
DeKalb	Sycamore	" 18—20
Stephenson	Freeport	" 23—25
Mercer	Millersburg	" 24—26
Ogle	Oregon	" 24—26
La Salle	Ottawa	" 24—27
Bureau	Princeton	" 24—27
Montgomery	Hillsboro	" 24—27
Whiteside	Morrison	" 24—27
McLean	Bloomington	" 24—28
Logan	Lincoln	" 25—27
Pike	Pittsfield	" 25—28
Sangamon	Springfield	Oct. 1— 2
Knox	Knoxville	" 1 — 4
Grundy	Morris	" 1— 4
Madison	Edwardsville	" 1— 4
Putnam	Hennepin	" 1— 4
Vermilion	Catlin	" 1— 5
Lee	Amboy	" 8—11
Monroe	Waterloo	" 15—17

Farming in Kansas—Good Reports.

[The following letter, dated at Lawrence, Douglass Co., Kansas, Aug. 5th, is from Mr. E. B. Whitman, who was, if memory serves us right, the President of the Constitutional Convention at the organization of the Territory into a State.]

To the Editor of the American Agriculturist:

The good people in the older States, who so generously came to our support in a time of famine, will be rejoiced to hear of our prosperity this year. As a State we shall unquestionably produce a large surplus of breadstuffs and vegetables, above our own consumption, and from the sad experience we have had, proving that our State is liable to occasional extreme drouths, our people will be inexcusable if they do not lay by a supply in advance for such an emergency. Many farmers have planted double their customary amount of land, and the prospect for full crops is unusually good. The Spring was late, and March and April rather dry, leading some to fear a repetition of last season's drouth, but before the middle of May every doubt on that point was dispelled, and we have had fine showers just when needed, during the whole of the Summer.

Many fields of spring wheat will probably average 30 bushels to the acre. Winter wheat is all good—some of it excellent. Rye and barley, sown for the first time to any extent, and the result is a good crop of both. Potatoes were never more promising. Buckwheat is now up and looks well. The certainty of an enormous crop of corn seems beyond question. The yield must vary from 50 to 80 bushels per acre. In many cases the cost of cultivation, with a yield of 80 bushels per acre, will not exceed five cents per bushel.

For the last two weeks we have had an unclouded sky, transparent atmosphere, burning sun, hot nights, with the thermometer ranging from 85° to 100°. In all probability, this weather will be the type for the remainder of the month, varied by an occasional shower, furnishing every condition requisite to the complete perfection of all our crops.

Our Agricultural Societies will again resume their operations, and fairs will be held this year in several of the most populous counties, foremost among which is Douglass County, the charter of which provides for an annual tax of $500 to $1000 to be assessed upon the county, which shall be expended in premiums. This, in addition to the other sources of income, enables the infant society to start out with vigor, and in the future you may expect to hear good accounts of the agricultural character of our county, and State. E. B. WHITMAN.

USE FOR THE AILANTHUS.—A European Journal states that Count Lambert, a great Russian landed proprietor living at Odessa, having failed for sixteen years in various attempts to fix the deep blowing sands on his estate, has at last succeeded by means of the Ailanthus tree. The seeds were sown, and the running roots have taken full possession of the soil, the trees forming an almost impenetrable forest. Measures are now being taken by him to introduce the new silkworm which feeds on the Ailanthus.

The "Army Worm."—(*Leucania unipuncta.*)

For a month past we have been receiving accounts of the ravages of this pest, with frequent samples of the worms themselves, from various localities, too numerous to specify here. Few of those forwarded by mail from a distance have arrived in a live, or even in a perfect state. All the descriptions point to the same insect, though some are described as dark brown, or black, with yellow stripes on the sides, and others are called dark green, light green, etc. This variation in color has probably resulted from the light in which they were observed, and the kind and amount of food they had just consumed. Dr. Fitch, our State Entomologist, says this is the larva or caterpillar, of the *Leucania unipuncta*—a moth measuring about 1¾ inches across the spread wings. The color of the fore wings is a tarnished yellowish drab, with a small white dot near the center, and a dusty oblique streak at their tips. The hind wings are a smoky brown, with a purplish gloss, and nearly transparent. The abdomen, or hind body, is smoky gray above, and ash gray beneath. The moths deposit their eggs upon the grass near the ground, which soon hatch out little worms that feed upon green herbage, and rapidly develop into worms 1¾ to 1½ inches long.

The general descriptions sent to us correspond with the worms we obtained near Greenport, on Long Island, and others brought to the *Agriculturist* office from localities so near at hand that they have been transported alive and in vigor. The general color of the worm is dark brown, or they appear nearly black when crawling on the ground. The legs are sixteen in number, with yellowish stripes along the body just above the legs, and three other stripes of the same color along the back. The stripes are not very plain at the middle, but quite distinct nearer the ends of the body. The head is marbled with dark lacework on a yellowish ground; and from the top of the head two dark lines run down in front, spreading apart in a curve near the mouth. The body appears naked, but a close examination shows a few short hairs, which are most numerous near the head.

The worms move with considerable rapidity. Where they were moving in a path at ordinary speed, we marked the sand before them, and tested their speed by the watch and rule; it averaged full 3½ feet per minute, or over 200 feet per hour. When not feeding, they seem to be "always in a hurry to get somewhere."

They are called the "army worm," because they appear to move together in vast numbers; but from what we have observed of their habits, we judge their being together thus, is a matter of chance, arising from circumstances favoring their production and development in a particular locality. They feed upon the leaves and heads of grain, corn, grass—in short upon almost every green thing, though they seem to have a choice for the grain and corn fields, and unless in great numbers, do not attack potato vines, pumpkins, and some other vegetables.

They probably enter the ground at maturity, and change to the chrysalis state, and, similarly to the butterfly, come forth a moth another season, to reproduce another army of worms from eggs. From their sudden appearance in so great numbers, it is possible that they may in part lie dormant for years, and come forth at long intervals when circumstances of weather, etc., favor their development. Of these matters, however, we can not speak with any degree of confidence.

Turkies and hogs feed upon the worms and destroy great numbers of them, and it is probable that working the ground in Autumn or early Winter, may disturb the chrysalides and promote their destruction by frost. Fires lighted at night, at the time the moths appear, would probably attract and destroy large numbers of them. The best remedy yet discovered, though very imperfect, is partially effective. This is to plow a deep smooth furrow in their pathway, turning the slice toward them, and leaving a smooth steep landside, up which they can not well climb. A billet of wood drawn through the furrow occasionally, will kill them. Some have spread straw in the ditch and on the turned furrows, and when this was covered with the worms, set it on fire. Care must be taken to leave no straws against the land side for them to climb out upon. Others have made large, deep holes at intervals along the furrows, and the worms falling into them, are unable to crawl out. We hope other methods of destruction, or prevention, may be speedily discovered, for if, in the many localities where they have appeared this year for the first time, they multiply as rapidly another season, we may well be solicitous for our future crops. We shall be glad to receive any useful information on the subject for the columns of the *Agriculturist*.

Another Grain Destroyer.

The Grain Aphis (Aphis Avenæ)—Letter from Dr. Asa Fitch.

Just as we were going to press with the August No., several communications were received concerning the depredations of an insect which had not before been known to be sufficiently numerous on grain to cause marked injury. Mr. Ebenezer Selleck, Niagara Co., N. Y., forwarded specimens of wheat ears on which the insects were very numerous, and others were brought in from Long Island. They were at once recognized as Aphides, or plant lice, a general description of which genus appeared in the *American Agriculturist*, Vol. XIX, page 80, (March 1860). In order to obtain more specific information concerning them, we forwarded specimens to Dr. Asa Fitch, who responded as follows:

"The insect you send me is the grain Aphis, *Aphis Avenæ* of entomologists. This insect is vastly more numerous here, this year, than I have ever noticed it before, and is exciting considerable alarm among the farmers in this vicinity. It is a small plant louse; some are grass green, others deep orange or reddish, (I have seen both colors born from the same parent,) which stations itself mostly at the very base of the chaff in which the kernels are inclosed, and sucks the juices which should go to perfect the kernel. Thus the grain will be shrunken and light of weight where these insects are numerous. A large portion of the ears, in every wheat field I have examined, had a little cluster of these lice crowded together around the base of almost every kernel. As the wheat, rye, and barley, become ripe and juiceless, the insects disappear from them and gather upon the oats, this crop being so much later in ripening. Hence oats more than any other grain crop, are liable to be thronged by them.

I do not know as there is any feasible remedy for this aphis. I would recommend a trial of dry chloride of lime, sowing or dusting freely over a small space of the field, perhaps repeating it a day or two after, and in a day or two more it can be seen whether this smothers and destroys these insects sufficiently to render it worth while to resort to a more extensive use of it. A neighbor tells me he is unable to find any of this article in the stores hereabouts, that is not deliquesced, and thus unfit for this use—else I should have tried its effects myself."

P. S. Since preparing the above, we have made several excursions in various directions from New-York, and have found the insects very abundant upon oats. In Southern Connecticut, and especially on the eastern portions of Long Island, we have seen them in great numbers. In a field near the center of the Island, we could not find a single head of oats on which there was not a complete circle of the aphides around the neck of *every* kernel. In many places they appeared in such numbers as to change the color of the fields of grain. They have also been forwarded to us from many counties in Pennsylvania. Some farmers seemed to think they will do no harm, while others say they suck the entire life out of the grain, which we found to be the case where the oats were not nearly mature before the development of the insect. We are now daily receiving information which indicates that the appearance of the insect has been very general over the country. How to account for this, whether it is to depart, or return in still greater abundance another season, and what remedy, if any, can be resorted to, are questions we can not now answer. Several insects, particularly the well-known lady bug, feed upon these aphides, and it is worthy of remark that these friendly insects are very numerous the present season, so that we may hope the increase will be checked. Anything throwing further light on the subject will be of special interest to the country at large.

Teaching Hogs to Destroy Thistles.

A writer in the Southern Homestead says: "I will give a method of exterminating thistles which I have tested and found effectual, and which costs nothing. It consists in teaching hogs to eat the roots of the plant. Tramp on the buds of a goodly number of the largest plants in the Spring, and place on each bud a teaspoonful of salt; then turn your hogs on them. They will eat the roots of the salted plants first, and will thus acquire a fondness for the roots, and will continue to eat them daily as long as any can be found. If but one hog be educated in this way, he will teach the whole herd to eat them, and they will exterminate all on the farm."

Sowing Wheat and Rye with Buckwheat.

A correspondent of the Prairie Farmer says: "Last season I tried sowing my rye with Buckwheat. Put in that way it did much better than that sown after the buckwheat was cut, and it produced heads nearly twice as large. The rye must be well harrowed, sowing the buckwheat afterward, and brushing it in. If the rye is only brushed, it is apt to be drawn out with the growth of the buckwheat. The rye will seldom be found to grow too much under the buckwheat; if it should, it may be fed down in the Fall. The readers of the *Agriculturist* will remember the recommendation of Dr. C. Harlan, in Feb. No., page 35, to sow buckwheat with Winter grain in the Fall. It is cut down by frost before maturing, and serves as a protection to the grain through the Winter. Let the experiment be repeated on a small scale by others, this Fall, and the results noted next year, and reported.

Draining—Why—Where—How.

(*Continued from pages* 36, 70, 105, 137, 169, 201, 233.)

LAYING OUT DRAINS.

The first thing to be attended to, is the finding of a suitable *outlet*. Many have written to us recently, that this is their chief difficulty, owing to the location, or the flatness of their lands. For some hints on this subject see *May Agriculturist*, page 137. A large fall is not necessary to carry off water. One inch fall in 100 feet will answer in extreme cases, and we have heard of efficient drains with a fall of only 1 inch in 200 feet, though much more is desirable. If it be impossible to find any outlet into a brook, or highway gutter, or across a neighbor's land, we should say, choose the lowest field that can be used to receive drainage, and give this up to grass, turning the water of the rest of the farm upon it. Better have one field injured or even spoiled by excess of water, than to leave a dozen others, all more or less defective through the same cause.

In connection with the outlet, it is necessary to look after the *main drain*, and its principal feeders or sub-mains. The natural conclusion would be that the main drain should be so located as to receive and carry off readily all the water flowing into it. Usually, the main drain should be so located that the sub-drains may run *down* the sides of slopes. And here comes up the general question of the direction of drains upon sloping or hill-side lands. For illustration, suppose we have a field upon the side of a hill, inclined say from East to West—the upper part, five, ten, fifteen, or more feet higher than the lower part. And suppose, also, that the same field slopes a little from South to North. At

Fig. 28.

first thought, it would be considered best to run the small drains across the field into the main, so as to cut off the water flowing *down* the hill, and carry it into a main, running down along the north side. This error most persons naturally fall into. As explained on page 105 (April), most hill-side soils are made up of successive layers of loose porous materials, alternating with those of an impervious character—regularly as seen in fig. 28, or irregularly as in fig. 5. It is the occurrence of the close compact strata, that prevents the water from sinking down. Now, suppose that in fig. 5 we run drains *across* the slope at *b*, *d*, and *f*. The drain at *b*, will collect the water from above and carry it over to the main drain running down the hill further North, at least so much of it as does not flow out from the lower side of the drain and follow the natural course down the hill. But all the water in the surface soil between *b*, and *d*, would still flow

Fig. 5.

through the surface until it reached the next drain at *d*, and this intermediate space would be kept wet. But suppose that instead of running these drains across, we conduct them right down the hill, as shown in fig. 30. They will then cut *all* the layers of soil, and drawing in the water from each side, will keep the whole dry. Taking into account the fact that sloping or inclined soils are made up of different strata coming out to the surface one below the other, and also the fact that cut-off drains across slopes are liable to discharge more or less water along their lower sides, it may be laid down as a general rule, that, so far as practicable, all drains should run as nearly as possible directly *down* the inclinations of side hills or sloping lands. If the surface be broken with gullies or hollows, running up the hill, or diagonally across the general slopes, the most approved plan is to run main or sub-main drains up through the bottoms of the gullies, and then cut short side drains down the inclinations at nearly right angles to the main or sub-main drains. To state

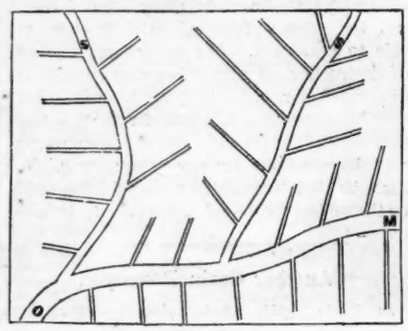


Fig. 29.

the rule in general terms; let each drain be so arranged as to give the greatest fall throughout its whole length.—In Fig. 29 we give a diagram of the drains in a 10-acre field which we visited not long since. The main drain, *M*, runs along the lowest place in the field, with an outlet at *O*. The two sub-mains, *S*, *S*, pass through lower portions, or valleys, while the smaller drains run directly down the sides of the higher portions. Where a field is so situated upon an inclined plane, or at the base of a hill, that it receives surplus water from a farm or field above, on one or more sides, it will be well to not only pro-

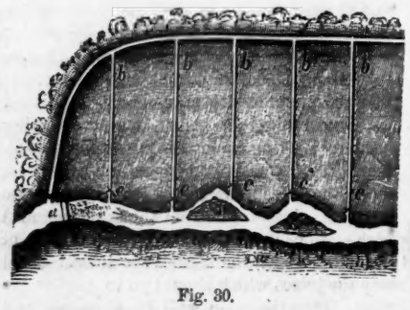


Fig. 30.

vide parallel drains down the field, but also to place a cut-off drain around the upper side to receive and carry off the entire outside water. This is illustrated in fig. 30, in which *a* is a brook at the base of the hill-side, (or it may be an open or covered artificial drain). The smaller down-hill drains are shown at *b*, *b*, *b*. The cut off drain curves around at the base of the higher ground above the field, discharging near *a*. As hinted previously, it is impossible to give specific rules applicable to every case. In laying out drains, every man must exercise his own judgment, and be guided by the peculiar location of his field, and the nature of the soil.

Where the surface of a field is much inclined, or very uneven, the eye is usually a sufficient guide; but on land nearly level, some kind of a leveling implement is needed. For a home-

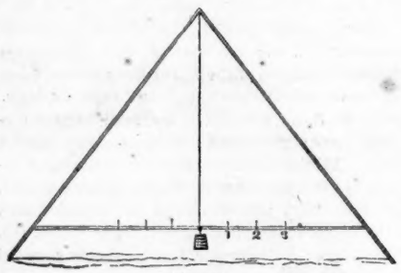


Fig. 31.

made instrument a flat board with an oiled surface will answer very well. By pouring a little water upon the center and placing the board so that the water shall spread out uniformly in all directions, a pretty good level surface can be obtained for sighting across. Fig. 31, is also a convenient instrument. It is simply a triangular frame of wood, with a weight suspended from the upper angle by a cord. By turning it round end to end on a level floor, the center point can be found, and then whenever the weight cord is brought against the center point, the cross or horizontal bar is level and may be used for sighting across. The inclination for a fall of a foot, or an inch, in each five or ten rods, may be ascertained by experiment, and the place of the cord on the cross-bar be indicated by the figures 1, 2, 3. When once marked thus, the instrument will be convenient to lay out drains at any desired inclination, or amount of fall per rod. The common spirit-level (fig. 32,), used by carpenters, and builders, is very convenient. One

Fig. 32.

can be bought for a few shillings, or be borrowed of a neighboring carpenter for temporary use. Fig. 33 illustrates the most convenient mode of using this instrument. Going to the lower end of the proposed drain, place the spirit-level at *a*, on a support so high that when leveled, the line of sight shall strike the surface of the ground near *b*. The stakes, 2, 3, 4,....are set up, say one rod apart, along side the proposed drain, and while one sights the instrument, another marks the stakes at the top. If the entire fall from *b* to *a* be 10 inches, more or less, there is then a fall of say 1 inch to each rod. Beginning at stake No. 10, make a second mark 1 inch below the upper one. Mark No. 9, 2 inches below; No. 8, 3 inches below, and so on. If then the depth of the drain, *d*, is to average 3 feet, it is only necessary to dig at any point just 3 feet below the *lower* mark on the stake at that point, keeping the grade of the bottom uniform between any two stakes. By this exceedingly simple plan we have been able to secure an almost perfectly uniform grade for the bottom of drains, the diggers using a straight-edged board as a guide *between* the

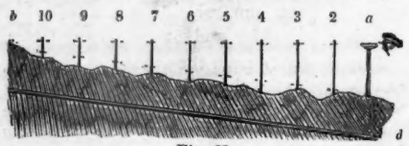
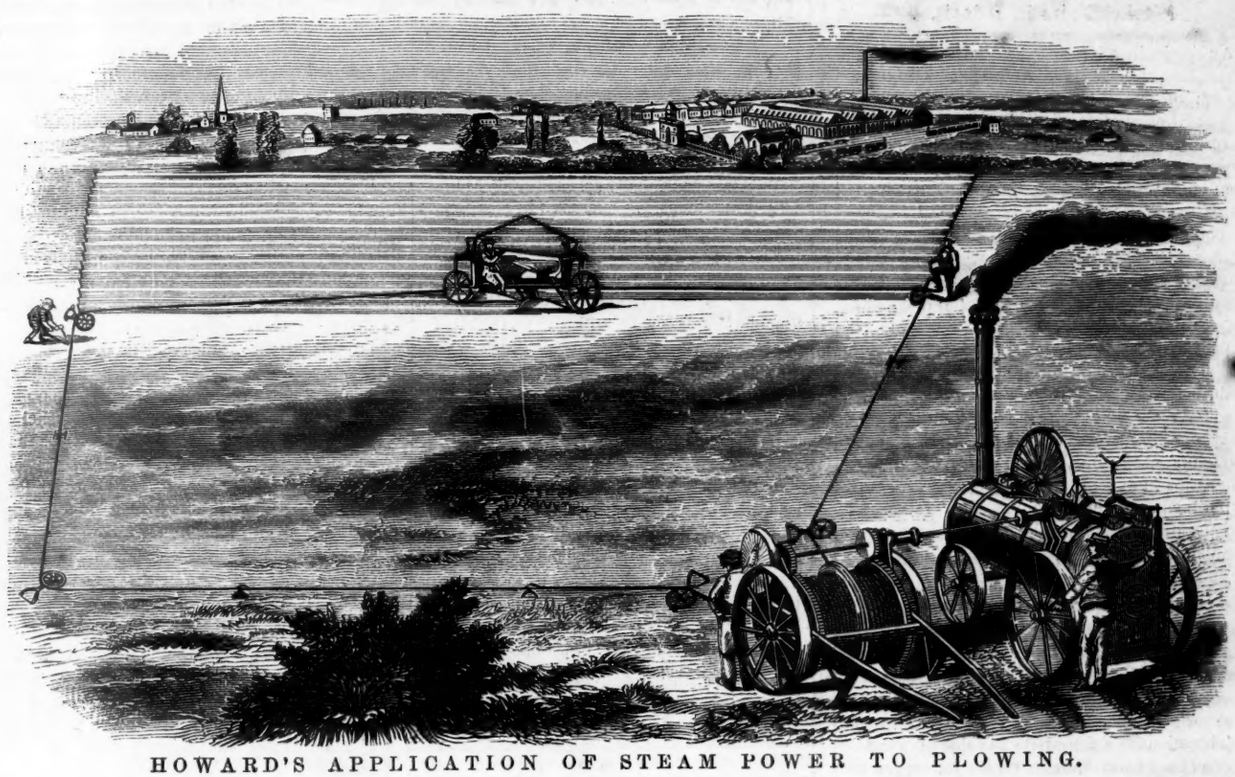


Fig. 33.

marked stakes. In practice also we usually set the stakes only 10 or 12 feet apart, as they are easily and quickly put down and marked, and the nearer they are together, the more readily will the bottom be kept to a true grade.



HOWARD'S APPLICATION OF STEAM POWER TO PLOWING.

We begin to fear the failure of our prediction, a few years ago, that "the man who would first *successfully* apply steam power to general cultivation, probably lived on this side of the Atlantic." Our American Fawkes seems to have been on the point of realizing complete success, but there is still some defect, we know not what, that prevents his implement from coming into general use. In England, on the contrary, both Mr. Fowler and Mr. Howard have so far succeeded, that the manufacture of these implements has been commenced to supply orders for actual field use.

Mr. Fawkes is at work trying to get up a *traveling* engine, one that shall traverse the field like a huge elephant drawing his load after him. Mr. Fowler places his engine upon one side of the field, and moves it along the head land as the work proceeds, drawing and sending the plows to and from the power, by means of ropes and pulleys. Mr. Howard stations his engine upon one corner of the field, and lets it remain there, sending his plows to different parts of the ground and moving them backward and forward by means of ropes and pulleys. From the descriptions of the two modes (Mr. Fowler's and Mr. Howard's,) we have been inclined to give the preference to Mr. Howard's plan, because he does not require an engine specially constructed for the purpose, but can use any farm steam engine that can be transported to the corner of a field; while Mr. Fowler requires an engine constructed to move along as the work progresses.* Believing that it would greatly interest our readers, we have introduced the engraving above to show Mr. Howard's apparatus at work. It hardly needs description, as the whole operation is plain from an inspection of the engraving. A drum is anchored near the stationary engine, and ropes run to anchored pulleys at the two nearest corners of the field, and from them to movable pulleys on two opposite sides of the land to be plowed. A number of plows attached to a frame running on wheels, are so arranged that when the frame moves in one direction, one set of right-handed plows are turned down, and when it moves in the opposite direction, the other set of left-handed plows are turned down. The draft ropes are wound upon the two ends of the drum to keep them from interfering, and one winds over the drum and the other under it. Now, as long as the drum is turned in one direction, one rope is wound up and the other unwound just as fast. As soon as the plows reach the side of the field, the motion of the drum is reversed by the engineer, and the plows are drawn backward, and the other plows being turned down, the plowing goes on. There being half a dozen or more plows at work in the gang, and the motion made as rapid as desired, a large amount of surface is plowed during a day.

* We learn by the last received papers, that at its recent meeting, the Royal Agricultural Society of England awarded the first prize of £100 to Mr. Fowler, and the second prize of £75 to Mr. Howard. This does not alter the opinion stated above, that Mr. Howard's method will have the preference where it is desirable or necessary to use for plowing, a steam engine already constructed.

What is Cultivated in England—The work for the Steam Plow.

The Agricultural Gazette (Eng.), in some remarks upon the success and prospects of the Steam Plow says: "Recent statistics show that the Wheat lands of this Island exceed 4,000,000 acres; the Barley land nearly 3,000,000 acres; the Oat crop exceeds 2,000,000 acres; the Potato crop over 700,000 acres; the Turnip crop each year nearly 3,000,000 acres; other crops exceed 700,000 acres; while 900,000 or more acres are in bare fallow. At least two-thirds of all this—nearly 15,000,000 acres—can be cheaper plowed and worked by steam than by horses... Here are 15,000,000 to 20,000,000 acres to be plowed each year—equivalent to 2,000,000 days' work for a 12-horse-power engine. As there are not more than 120 convenient plowing days in the year, it will require *fifteen thousand 12-horse-power engines to do the work!*" QUERY.—If the comparatively small island of England (including Scotland and Wales) will need 15,000 engines, how many will be needed on the vast surface of the United States.—ED. *Agriculturist.*

For the American Agriculturist.

Which way should Drills Run?

An erroneous impression seems to prevail in regard to the proper direction in which to place drills for plants cultivated in that manner. They are usually laid off North and South, in order to get the greatest benefit from the direct rays of the sun. Instead of North and South, the rows should run East and West. Suppose a piece of ground planted in drills two feet apart, running North and South; the plants by the middle of July having attained to the hight of four feet, each row will be shaded by the one next East of it, until about the middle of the forenoon, then from the middle of the afternoon till night, the shade of each row will fall on its next Eastern neighbor. If the drills run East and West, the distance apart and the hight being the same, the shadow of any row will not reach another row, excepting when the sun is near the horizon, early in the morning or late in the afternoon. In latitude 40 degrees North, the shadow of a plant four feet high will not reach two feet north from its base until about the tenth of August. W. L. JUDSON.

Hancock Co., Ill.

[The above question admits of discussion.—ED.]

Instead of idly waiting for something to turn up, go to work and turn up something.

Market Fairs in Illinois.

An Agricultural Society has been formed at Loda, Iroquois Co., Ill., which has instituted a system of Monthly Market Fairs, similar to those started at Bedford, Westchester Co., N. Y. Farm produce of every description is offered for sale under the supervision of the Society, on the first Saturday of each month. The expenses of rent and advertising, etc., are to be met by commissions of from 1½ to 2½ per cent on sales, according to the amount sold. The Association regulates the manner of payment, requiring all sales, to be made on four month's bank notes, running at 10 per cent per annum; to be approved of by the Finance Committee of the Society. A discount of 5 per cent is made for cash. Parties offering articles for sale, must give ten days' notice, to enable the property to be properly advertised.—These market fairs, though an old institution in Europe, are a new enterprise here, and it remains to be proved by experiment, whether they will work well under our peculiar system of labor, and in our more sparsely settled country. We hope they may be successful.

Sale of Jonas Webb's Southdown Sheep —Great Prices Realized—The Best Bought by an American.

The sale of Mr. Jonas Webb's flock of Southdown sheep at Babraham, on July 10th, marks an era in the history of sheep husbandry, and will long be remembered, both from the successful termination of Mr. Webb's career as a breeder of sheep, and from the influence which the dispersion of his flock will have upon the flocks of the world. All the leading Southdown breeders of Great Britain were present, or were represented at the sale, and agents from nearly every quarter of the globe assembled to compete for the choice animals offered. The gathering of not less than 3000 persons on the ground showed the interest excited. The competition was keen, and the prices obtained were the greatest ever recorded. The highest priced animal, a two-year old ram, was taken by our enterprising countryman, Mr. J. C. Taylor, of New-Jersey, at *one thousand three hundred dollars!* The highest priced ewes, a lot of five, were sold to an English Baronet, Sir Thomas Lennard, for $170 each, after a sharp contest with French and German agents. The average prices were as follows: 99 rams, two years old and upward, sold at $15,260, or an average of $154 15 each; three of the number each brought $500 and upward, and one $1,300, as noticed above; 199 yearling ewes amounted to $11,015, or $55 35 each; 120 of this lot went at more than $50 per head; 109 yearling rams brought $13,550, an average of $124 31 each; 105 two-year old ewes sold at an average of $37 50 each; 115 three-year old ewes at $31 each; 230 full mouthed ewes, $22 83 each; and 110 aged ewes $18 08 each. In all, 967 sheep were sold for $54,610, or $56 48 each.

The breeding of sheep so excellent as to be eagerly sought at such prices, has, of course, been the work of years, almost of a life time. Mr. Webb commenced his labors in this line 38 years ago. His original flock was made up of the best ewes and rams he could obtain from five different sections. To these a few others were added, but for more than 20 years past the stock has been kept up without aid from any outside flock, and their size, weight, vigor, quality, and value, have steadily improved. In remarking on this extraordinary success, the London Agricultural Gazette says, the secret of it is, Mr. Webb's judgment, extraordinary acuteness, soundness, and self-reliance, and a resolution whose tenacity will not yield, though the decision of Agricultural Societies and their judges be repeatedly against it. In short, the best stock was continually selected for breeding, and good judgment was exercised in crossing.

Not every breeder of animals may meet with Mr. Webb's success, but every one may derive some profit from his experience, which proves that it pays to use care and judgment in the selection of animals. Who will rear an American breed of sheep which, twenty or more years hence, will attract eager purchasers from Europe, and from all the world?

P. S. As stated above, the highest priced, and the most valuable ram, was secured for the United States, for which the especial thanks of his countrymen are due to Mr. Taylor. No other ram sold for over half the price paid for the one obtained by Mr. T. The Mark Lane Express, of July 15, just received, gives a long and minute report of the sale. Here is an extract which will interest many of our readers:

"The extraordinary competition for No. 89 was the great event of the day; he was by the sire of the first prize yearling at Canterbury, dam by The Little Sheep, and was put up at 20 guineas; he rapidly advanced by fives to 60 gs., from which point he went slowly to 67 gs., as if he would advance no further; next 70 gs. were offered, and the bidding, by fives, now suddenly broke out again, and carried the offers rapidly up to 130 gs.; and then some bold wight, determined to crush all rivalry, sung out '150 gs.!' but to no purpose, for 160 gs. was immediately proffered in opposition; the next bid was 170 gs., then 175, then 180, then 190, then 195, then 200, then 205, then 210, then 215—what not done yet? no—'I'll go another five,' says some one: and so he does, shouting out 220 as if that would settle the business; vain hope! 225 is the immediate response—230—235—240—245—250—255—260! ($1300!) The ivory hammer fluttered nervously in the air, and one thousand pairs of eyes watched it fall at last in favor of Mr. Hudson, of Castleacre, who bought the ram for Mr. J. C. Taylor, of Holmdel, New-Jersey, U. S. The crowd swayed for a moment to and fro with that undefinable impulse to 'move on' somehow, which actuates men under such circumstances. There was also an attempt to get up a cheer, but it came to nothing, although the Norfolk visitors seemed particularly proud that their celebrated countryman had once more appeared A. 1 against all comers, among the most determined of whom was Mr. Rigden."

For the American Agriculturist.

Hints on Fattening Swine.

Nature clearly intended the hog to be a depository of fat. No animal has a better appetite, or is less dainty in his choice of food; good digestion waits upon his appetite, and his love of ease favors the process. Yet, though he takes thus naturally to fattening, much may be done by man to hasten or hinder the operation, and the profit in rearing swine depends very largely upon supplying favorable conditions for the desired accumulation. The plan too often followed, of allowing these animals to shift for themselves mostly, and barely exist until the time comes for putting them up to feed for killing, is not the most economical. A pig treated in this way becomes stunted, wild, uneasy, and voracious. It will require several weeks of heavy feeding to bring him up to the point where fattening should commence, and even then he can not attain the proportion which more liberal treatment would have given. One of the most successful pork raisers in the country said: "I begin to fatten my hogs from the time they are old enough to squeal, and I keep them so busy eating they have no time for squealing." Some persons have the notion that the accumulation of fat in a pig interferes with his growth, and therefore he should have a rather spare diet for the first six months, in order to attain large size. But fattening is only the storing away of the excess of digested food. The wants of the growing bones, muscles, etc., are first supplied, and any surplus is deposited in the form of fat; and there need be no fear that the growth of other parts will suffer while fat is accumulating.

The most common error in fattening swine is delaying it until late in the season. The food taken into the system is required not only to build up the tissues, but to furnish animal heat. In warm weather but little fuel or food is needed for this purpose, and fat accumulates readily; almost the whole food eaten, will be exhausted in keeping the animal warm. Hence the policy of commencing to fatten early. One bushel of corn fed this month will give better returns than two expended in the depth of Winter. It is advisable to keep over a stock of old corn to feed with until the harvest commences, and a supply can be taken from the field.

Every animal relishes a variety of food, and fattening swine will turn with eagerness from their accustomed feed of corn, to munch pea vines, or green corn stalks. Their appetites will be kept up by gratifying this natural desire. Ground feed of rye and oats, or oats and peas to take the place of corn occasionally, will be beneficial; and there should be a liberal allowance of green food, with all the dairy wash that can be spared. Clear water is also essential, and should always be supplied to the pen.

Do not allow the sties to become filthy; swine are naturally cleanly in their habits, and by furnishing them with plenty of litter, a valuable addition will be made to the manure heap.

EXPERIENCE.

Food for Bees in Dry Weather—An Important Hint.

[Our gardener, Francis Otto, placed the following into the *Agriculturist* drawer, and it strikes us that the hint given is an important one to all bee-keepers. We are raising a large plot of Mignonette to obtain seed for our next year's free distribution to subscribers, and we have noticed for some time past that the plants have literally swarmed with honey bees.—ED.]

If not at all times, at least in hot dry seasons like the present, when there are but few flowers yielding honey, and also in places where bees are compelled to fly far away for food, I think there is no other plant which yields such a long succession of flowers as the Mignonette (*Reseda odorata*). Of so great value has it proved this year, that, as I learn, an extensive bee-keeper is preparing to sow it on a large scale next Spring—two or three acres at least!—solely as bee food.

Mignonette is very easily cultivated, and its long tapering root seems to fit it for standing drouth remarkably well. Furthermore, it can be sown very early—in fact the earlier the better, for the seeds, if not previously soaked, lie in the ground two or three weeks before starting. It will stand some frost both in Spring and Autumn. I would therefore advise bee-keepers to provide a large plot of Mignonette, not only to furnish early food for their bees, but especially as a resort in such a dry time as this—just as they would provide soiling crops for their cattle.

COL. FREMONT found bees on the highest peak of the Rocky Mountains, 12,000 feet above

the level of the sea. They had probably been carried there by a strong upward current of air.

Tim Bunker on Lightning Rods.

MR. EDITOR: "What are you putting up that iron thing on your barn for?" asked Jake Frink, as we were at work upon the last job about the new barn, which I have not yet said anything about in the *American Agriculturist.*

"I am going to have the barn finished," I said. "We want a rod just as much as we want windows in the frames, or shingles on the roof."

"I guess the litenin 'll go where it is sent, rod or no rod," observed Tucker, as he thrust a new piece of pig-tail into his cheek.

"Wasn't Squire Rodman's house struck with lightnin last week, though it had a rod on it," asked Jones, triumphantly.

"Yes, but the rod was joined with hooks and eyes, and the connection was not perfect," observed Mr. Spooner, who was one of the group.

"Don't you think your provokin the Almighty by puttin up that rod?" asked Deacon Little, who has never forgiven me for turning salt marsh into meadow, and raising three tuns of herds-grass to the acre. "You see," continued the deacon, in his favorite style of argument, "that what is to be, will be, and you can't help it by lightnin rods or any other instrumentality. If it is decreed that your barn is to be struck with lightnin, I guess iron rods ain't goin' to save it. A man better not tamper with thunderbolts."

"Now," said I, "Tucker, what have you got a chimney to your house for?"

"Why, to carry the smoke off, to be sure, and to keep the house from burning up when we make a fire."

"Well, said I, "won't the smoke go where it is sent, just as much as the lightning. And yet you don't find any difficulty in making the smoke follow the inside of the chimney, until it gets up into the air out of your way. Now I admit that lightning is a little more dangerous to handle than smoke, but it follows certain laws, just as straight as smoke does. You see, lightning has what the philosophers call an affinity for iron, and it follows the outside of a rod, just as smoke does the inside of a chimney. Some say it goes down, and others say it goes up. At any rate, it sticks to the rod, and so passes off without doing any damage, just as smoke sticks to the chimney. If you want to know why it does that, I will tell you when you can tell why smoke goes up chimney. It follows the road that is built for it, just as regularly as a locomotive follows the railroad."

"An engine would go rather promiscuous, Squire, if't wa'nt for them 'ere rails," said Seth Twiggs, as he blew an extra puff from his pipe, illustrating that smoke would go where it was sent, when it did not follow a chimney.

"But that ain't a fair argument," said Deacon Little, "you know it ain't Tim Bunker, you infidel. We make smoke and can control it, but the Almighty makes the lightning."

"Well Deacon," I asked, "What have you put shingles upon your house for?"

"Why, to shed rain, of course."

"Very well," said I, "and the Almighty makes the rain, if he don't make smoke; and if a man is to be wet, he will be, and you can't help it by putting shingles over his head, or by any other instrumentality. It is no use tampering with what Noah's deluge was made of."

The Deacon saw he was caught, and looked over to Mr. Spooner for help. He always believes in Mr. Spooner's orthodoxy, when he sides with himself, otherwise he is heretical.

"I do not see how you can get round the Squire's argument against shingles, remarked Mr. Spooner, rather dryly.

"It stands to reason," I continued, by way of clinching the argument, "that rain is just as much a Heaven-sent article as lightning. If a man is wise in turning off the rain, by a shingle, he can not be a fool, or an infidel, in turning off the lightning by an iron rod." It is surprising, Mr. Editor, to find so much ignorance, and prejudice, in the community, against the use of lightning rods. It is just as well settled, in the minds of all intelligent people, that these conductors are a complete protection against lightning, as it is that roofs are a complete protection against the storm. Roofs sometimes leak, and the rods sometimes do not connect. In either case, the fault is not in the theory, but in the imperfect realization of it. A whole roof is a complete protection against rain. A good rod is a complete safeguard against lightning. And yet we find a hundred roofs where we find one rod. A house or barn is considered finished when the roof is on, and the glass is in the windows. I don't consider it finished until the lightning rod is on.

Most people consider it pretty good policy to get insured against fire, though there are some who seem to think it a sort of gambling to do that. A man builds a barn, worth $3,000, and when his stock and hay and grain are in, it is worth not less than $5,000. He gets it insured, at a cost, say, of $10 a year, and thinks it good economy. Upon the same principle that a man gets insured against fire, I think he had better get insured against lightning. It is much cheaper, and he has the advantage of being his own insurance company. All the rods that protect my barn, with the expense of putting them up, cost only $33, the interest on which is only $2 a year. The protection is perfect, and the rods will last as long as the barn does. Here is $5,000 worth of property made secure against lightning, for $2 a year.

It is very common to read in the papers, of lightning striking barns—setting them on fire, or killing oxen and horses sheltered in them. I consider that there is more danger to buildings in the country from this source than there is from fire. In the city it is different. The lightning rod is a very cheap insurance company. It never proves bankrupt and fails to pay. Dishonest clerks will not run away with the capital. Scamps and scoundrels can't steal the fluid and fire the barn with it. It will follow the rod with a good deal more certainty than smoke follows the chimney.

The pecuniary advantage of this protection is clear enough, and I guess Deacon Little will begin to see it pretty soon. But this is only one item. You see, it is a great satisfaction to know that your stock and your family, as well as your buildings, are all safe when a thunder shower comes up. I am not more scary than most people, but it is a mighty uncomfortable sensation, when the thunder is crashing around your dwelling, to think that the next bolt may find its way to the earth, through your body, or through one of your family. As our bodies are very good conductors, and we are not born with lightning rods on us, I think we had better put them on our houses, and then the lightning will go just where we send it.

I always noticed, before I put up a rod, that Mrs. Bunker took to the bed as regular as a thunder gust came up in the Summer. She has got considerable courage, but she said "no woman could be expected to stand lightning." But since we have had the rod, she sits by the window reading, with her spectacles on, just as calmly as if the lightning never killed folks. I don't know how two or three dollars a year could purchase so much comfort, in any other article. People's tastes differ, you see, about comfort. Mine runs towards lightning rods.

Yours to command,

TIMOTHY BUNKER, ESQ.

Hookertown, Aug. 15, 1861.

A Short Sermon on Stables.

The recent improvements in American architecture have not reached the stable, to the extent that could be desired. Brown stone fronts, high ceilings, marble mantel-pieces, costly furnaces for warming and ventilating the dwelling, may please the eye and promote the health and comfort of the occupants, while the valuable horses of the proprietor are suffering from a poorly constructed and poorly ventilated stable.

The fault often lies in two directions. The stable may be too tight, or too open. A horse needs light, as well as air and suitable warmth and food,—the vegetable structure hardly needs light more than he does. Pure air is essential. His blood can not become purified while the air which inflates his lungs is full of foul gases from fermenting manures. Nor is it enough to keep the stalls clean, if they are so tight that the horse is obliged to breathe his own breath over and over again. Digestion is interfered with, and all the functions of life are impeded. Lazy grooms declare that a close, warm stable, helps to make a horse's coat fine and glossy in Winter as well as in Summer. But in Winter, such a coat is not to be desired. Nature provides the animal with longer hair and more of it, to defend him from the cold. If the horse is well groomed and blanketed, his hair will be smooth and glossy enough all the year round. The indolent groom ought himself to be shut up for twenty four hours in the hot, steaming air in which he would confine his master's horse, and see how he would like it. Open the doors of such a stable in the morning, where several horses are kept, and the hot air and the harts-horn are almost sufficient to knock a man down. What wonder, then, that horses so used, should suffer from inflamed eyes, cough, glanders, and other ailments! The wonder is that they bear the abuse so long and so well.

Now, the "*improvement*" to our sermon is simply this: *ventilate the stables.* Ventilate, both in Winter and Summer. The outer air should be brought in at certain places near the floor, but not in the immediate neighborhood of the horse, so as to cause hurtful drafts of wind directly upon him. Impure air must be ejected, as well as pure air brought in. This can be done in Summer very well by leaving several windows open in different parts of the barn. But a better way is to insert ventilators in the highest part of the building, into which ventiducts, (square wooden tubes,) shall lead from the stalls, and which can be opened or closed at pleasure. These ventilators should be covered with a cap, to prevent downward currents and the beating in of rain. By this plan, the foul air is carried off directly from the stall without mixing with the hay in the loft.

PERIOD OF GESTATION IN MARES.—W. H. Ladd states in "Field Notes," that from records kept the last 13 years, he finds the more usual time of pregnancy with mares is 11½ months.

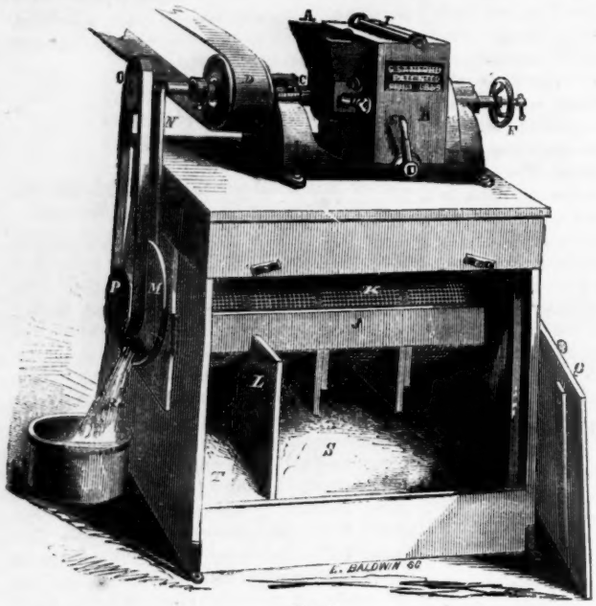


Fig. 1.

"Farm Mills."

Notwithstanding all that has been said by writers and advertisers, during a few years past, respecting the advantages of having a mill upon every farm, we have been inclined to doubt whether they are generally economical, that is for persons living in the vicinity of an ordinarily good Grist Mill, run by a miller who will not take more than the legal or stipulated "toll." To attempt to manufacture flour and meal at home on every farm, is too much like sticking to the old spinning wheel and family loom, when cloth can be made so much better and cheaper at a well organized factory. As a rule, the greater the "division of labor," the better and cheaper can all mechanical operations be performed. Still, where horse or steam power machinery is employed on a farm for other purposes, and especially where a grist mill is only accessible by several miles of cartage, and that over a poor road, it will not unfrequently be found economical to do the coarser grinding and crushing on some one of the small "farm mills" that are now to be obtained quite cheaply. We fully believe in the economy of grinding, or crushing all hard skinned grains, like oats, corn, millet, etc., before feeding them to stock, and access to some kind of mill is therefore needed.

There are also many localities, especially in new, or sparsely settled countries, where, owing to the lack of flouring mills, it will be found expedient, and even necessary to grind the wheat and corn used for home consumption, with some kind of a cheap, simple flouring mill.——For some time past we have kept watch of the various cheap iron mills brought before the public, and latterly we have been inclined to give the preference to what is called the "People's Mill," where the only use, for which it is required, is to grind or crush coarse grain for farm stock. Recently we have examined and witnessed in operation a cheap mill made by Bennet Brothers, (under Sanford's Patent,) in which the grinding surfaces are of the genuine French Burr Stone. Taking into account its durability, simplicity, and especially the fact that the same mill will grind coarse meal, or fine flour if necessary, it would seem to be adapted to general use, particularly in the localities referred to above, where grinding flour and fine meal at home may be required. Fig. 2, shows one of these mills with one side removed to exhibit the internal construction. The revolving cylinder, and bed, *B, B*, are both made of French Burr Stone, the same material that is used for large stones in the best flouring mills. By loosening the screws on the rod *G*, the stones are separated and easily cleaned or sharpened. The grain is fed through the hopper, *A*, whence it is conveyed in to the grinding surfaces in regular quantities by means of an ingenious adjusting screw, with a large thread. The ground meal falls out through the spout, below. By turning the screw, *F*, the grinding surfaces are brought nearer together for fine grinding, or separated for coarse stuff. By means of the band wheel, *D*, the mill is connected with horse or other power. The mill itself can be enclosed in a box 1½ by 3 feet.

In the larger cut, fig. 1, the mill is set upon a box supplied with a wire-cloth cylindrical *bolt*, *K*. The ground stuff falls into the cylinder at the right hand, and passing along it as it revolves, the finer flour or meal is deposited in the right hand division, *S*, of the box below; the coarser portions fall into, *T*, and the hulls or

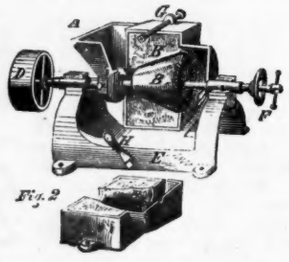


Fig. 2

bran fall out of the end into the measure, *R*. The other parts of the apparatus are sufficiently indicated in the engraving. These mills are of different sizes, with a guaranteed capacity of grinding from 5 to 40 or more bushels of *feed* per hour, according to the size, and the amount of power used. The cost varies from $100 to $170 each; the smallest size for horse-power being $100 without flour bolt, and $150 with the bolt.

How to Clean a Miller's Bolt.

To the Editor of the American Agriculturist.

In reply to the query of C. C. Fuller in the August *Agriculturist*, page 228, I would say that prevention is better than cure. The bolt should have a good supply of pure, dry air. The grinding should be done with as little friction of the stones as possible; when that is properly done, there will be but little difficulty with the bolts, so that by throwing in a quart of unground rye, when the bolts are in motion, they can be thoroughly cleaned in five minutes.

If by neglect the bolt becomes clogged, I have used a small whip to good advantage; it should be carefully used, and the knots trimmed smooth, so as not to fracture the cloth. Sometimes a bolt can be cleaned by carefully shaving the outside with a knife or a razor; then attach a stiff brush to a handle, the length of the bolt, to clean the inside: care should be taken not to raise the fuzz. Washing should be the last resort, and if not very carefully done, it is worse than useless. If you attempt to wash the cloth without taking it from the reel, you will probably shut as many meshes, as you will open, besides the cloth will likely break by shrinking. You can, with care and clean, cold water, wash the cloth, so that it will do very well, if you take it from the reel, but then you will have to supply a piece of new cloth, to fill up the shrinkage. G. B. SLACK.

Wayne Co., Pa.

Insurance on Farm Animals.

Buildings, vessels, and the lives of men are insured with profit to the community generally, and to the companies who engage in the business; why not insure the lives of animals? Associations for this purpose exist in Europe, and in one or two instances in this country we believe, but there is no general system of insurance for stock, such as is established to cover losses by fire. The risks and losses to which owners of horses, cattle, and other farm animals are subject, is sufficient to call for such an organization. The death of a single horse sometimes entails a loss equal to the burning of a building; a flock of sheep may be damaged hundreds of dollars in a single night by a worthless dog; and the loss of a poor man's cow is a severe family affliction. A well regulated live stock insurance company is needed to meet such cases.

We can imagine no objection against such an organization which will not apply equally against all insurance. It may be said, that insurance of animals' lives will make their owners more careless of their safety and thrift. But such exceptional cases can easily be guarded against by taking risks only up to a certain amount, say 75 per cent of the value of an animal; and furthermore, it could be expressly stipulated that proper attention should be given to the health and judicious use of the animal, under penalty of loss of the policy.

There might be a direct inducement to better care of stock, by refusing to issue policies for animals unsheltered in Winter, and otherwise neglected; or by granting them only upon payment of high rates of premium. We commend the subject to the attention of Agricultural Societies and Farmers' Clubs.

Effect of Hungarian Grass on Horses.

A few complaints of the effect of Hungarian Grass, or millet, on horses, and many inquiries on the subject have been from time to time received at the office of the *American Agriculturist*. Some have attributed the disorder called the "Stiffs" to the use of this fodder. We have not seen an animal so affected, but judge, from the description given, that it is a form of inflammation, such as might arise from over-feeding, or injudicious working of a horse after long confinement and high keeping. Millet seed is very strong feed, and when the grass is allowed to ripen, and is fed unthreshed in large quantities, its effects might be the same as feeding with corn or other highly concentrated food.

From all the evidence received, it does not appear that this seed contains any injurious ingredient, but that it may have been fed too freely to horses exercised sparingly, and the "stiffs" has resulted. This view is confirmed by a communication of W. G. Clark to the Prairie Farmer. He says:

"One would think, from what is written, that before Hungarian Grass came, horses rarely died or were seldom sick; but since my residence in the West, twenty years, all the diseases now chargeable to this grass, have prevailed to a greater or less degree. I do not say that this grass is without its influence, but it is unjust at this time to charge it with all. *An instance at hand:* A neighbor of mine had three horses, all that he had, down with the stiffs, unable to perform duty; a friend of his calling at his house, was informed of the fact, and they went and examined the horses. His friend said that this Hungarian grsss was the cause of it. The neighbor thought not; our friend was sure, and said it was killing all the horses in the country. Our neighbor thought otherwise, and informed his friend that his horses had not eaten a bite of the grass this Winter, nor ever had, as he had never raised a stalk on his place. This settled the question at once.

"The fault is in the excessive use of the grass. The horse is generally fed to repletion after standing in stables, and on hard floors, days and even weeks, without any exercise, and sometimes without sufficient water, and then perhaps taken out and put to severe service, by hands totally ignorant of his powers, abilities, and wants, and often dies, and a mysterious gloom hangs over the whole affair. I have wintered 16 to 18 head of horses and colts for the last three Winters, and in six years I have not lost a single head from any disease, and only two colts, one getting choked with a rope, and the other hooked by an ox. My best mare, two years ago, had the colic from eating soiled corn, fed to excess by boys, but with help got over it. I give all kinds of feed in proper quantities, and at proper times, and deem Hungarian grass among the best."

Dentistry for Dobbin.

Has our friend a favorite horse, whose only fault is his age? And have the old pony's teeth got out of working trim, so that he masticates his food imperfectly, and, as a consequence, is becoming somewhat gaunt, rough haired, and seedy? You begin to feel a little ashamed of him, as you drive the family carriage along the main street of the town. You think you will soon have to sell him for a younger and less sensible beast, yet you dread to think of it, so attached have you become to him.

Can't you help him, and his looks? Examine his teeth. The under jaw is growing crooked: the front teeth strike together before the grinders hit, and the incisors incline to project out of the jaw. Now, of course, this state of the teeth hinders complete chewing and mastication of his fodder; hence his digestion suffers, and nutrition fails. The upshot of the whole is that Dobbin looks "shabby."

The horse-doctors are sometimes a very useful class of men. A horse in the condition just stated, is one of their favorite subjects. Mr. Pierce, a Veterinary Surgeon, in Ohio, recommends the following treatment:

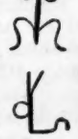
The remedy is simply to shorten the incisors by filing them off. Great care is necessary to perform the operation successfully, as there is great danger of loosening and damaging the teeth ever after. If too short, it injures their cutting the grass; if not in the right shape on the surface, it prevents cutting near the ground. The operation should be performed by one skilled in the practice, by putting the horse loosely in the stocks, and placing a leather covered roller in his mouth, with straps attached to each end, and buckled over his head. This gag should be removed once in five minutes, to prevent cramping of the jaws. The file should be double fine, cut short and broad, with a thimble of leather over the end, to prevent wounding the gums. [There is a fine copper rasp made expressly for this purpose.—ED.] The operator should have a vessel of water at hand to clean the file in when necessary, then hold the lip in the left hand and perform with the file in the right. After the operation is finished and the teeth well cleaned, wash out his mouth with salt and water, and give him a dose or two of alterative and tonic medicines, and in a short time your poor old horse will begin to thrive like a colt.

Stock Branding in Texas.

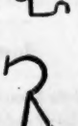
The great number of sheep, cattle, and horses, fed upon the wild pastures of the West and South-west, where the neighboring herds are liable to be mingled, renders the marking of each animal important. In some places ear marks are resorted to; in others branding or marking the sides; and in others both methods are combined. The double marking is preferable: 1st, from the difficulty of varying the ear marks sufficiently, and of distinguishing the animals readily, as well as the liability of the ear marks to be destroyed by accident or design; 2nd, the branding, though more conspicuous, is liable to be obliterated by the use of poor materials, by washing out, and by a coating of filth. We have before us a copy of the Rio Grande Sentinel of May 22, published half in English and half in Spanish, at Brownsville, Texas, which contains the announcements of the ear-marks and brands of 107 different stock feeders. Here are a few specimens:

FALCON, JOSE....Horse and cattle brand. Ear mark: split and upper bit in the right, and under half-moon in the left. Stock at rancho de Las Pajaros, range of the Infernillo, in Nueces county. 9

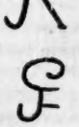
GUERRA DOMINGO.—Horse and cattle brand: Ear mark: two bits from the right—no mark in the left. Rancho of the Indio Muerto, Nueces county. may15-1y.



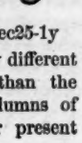
GUERRA, TOMAS.—Horse and cattle brand. Ear mark: swallow fork and two bits from the right, left ear entire. Ranch of the Indio Muerto. Nueces county. My15y



GARZA, MARTA.—Horse and cattle brand. Ranch at Las Visnagas, Cameron county. Dec5-1y



GALVAN, SIMON.—Horse and cattle brand. Stock at Rancho de los Indios, below Brownsville, Cameron county. Dec5-1y



GARCIA, JOSE D.—Horse and cattle brand. Ear mark: overslope and two under bits in the right and crop and under bits in the left. Stock at the Rancho Alazan, in Nueces county, and at Santa Rosalia in Cameron county. nov28-1y

GARZA, MARIANO TRENINO. Horse and cattle brand. Ear mark: crop and split in the right and underslope in the left. Stock at La Bareta and at the Tanque, Cameron county. Residence, Brownsville. dec25-1y

All of the 107 brands are so entirely different as not to resemble each other more than the seven given above; and the four columns of them together on a page of the paper present as comical an appearance as a page of Chinese hieroglyphics. One card is inserted and the paper furnished for a year for $5.

For the American Agriculturist.

Cheese Making.

The old Method—Article from Dairy Farmer—Preparing Rennet—Saving all the Fatty Matter, etc.

The way that our grandmothers made cheese was as follows: After the curd had come, they cut it as we do, and when it had "settled" very gently dipped off the whey—it was a spoiled cheese, they said, where the white whey was started. The curd was then dipped into a strainer in the cheese basket, and left for a while to drip, after which it was cut up in egg sized pieces, salted, and put to press. A short and summary process, certainly, compared with that of our modern vats, with their scalding and stirring method. Now if the writer in the Dairy Farmer, whose communication appeared in the *Agriculturist*, page 206, July No., had looked in the cheese whey of *their* dairy, he would have found as little cream as in his own. His coming off minus in this respect, was probably owing to two facts, first: that he skimmed his night's milk; and second, that he threw the "two or three *last* pails of his whey in the compost heap." It is from the latter that the most cream comes.

Some of the reasons why inexperienced cheese-makers make "one-third less than a good hand," are as follows: not enough rennet is put in, and the whey is milky; or the curd is broken up rudely, and perhaps when too cool, this also starts the white whey; or the milk is allowed to "turn" before the rennet is put in, and then the cream will ooze out after the cheese is put to press. In fact, anything that makes the whey milky, causes a deficit in the weight of the cheese.

For a large dairy, three or four rennets should be put to soak at once, and plenty of salt added. We cut them up in pieces, and let them stand in a couple of gallons of water for a week, then rub them through half a dozen more waters, about a quart at a time, which takes all the good out of the rennet, and it is of no further use. A day or two after, we skim the liquid, which is kept in a stone jar, and then having added still more salt, bottle it up in stone jugs for use. The reason of preparing so much at a time is, that rennets differ very much in strength, one is never any rule for another. Enough rennet must be put in to have the curd come in thirty to forty minutes, and having once ascertained how much it will take, the same amount will do all the way through. Every time we prepare a fresh jar of rennet, we mark the time the first morning, and perhaps have to the second, and third. It would certainly be a great desideratum to save all the fatty portion of the milk in the cheese, but I have yet to know the first cheese-maker who, putting in all the cream, and scalding the curd as we do, could accomplish it. A friend of the writer's said she could save nothing from her whey tub, and wondered how we got so much. "Do you skim your vat and save the cream?" I asked. "Yes." "Do you scald to a high temperature?" "No." "Then that's grandma's plan, and you have the same results," I replied.

In scalding a large curd in Roe's patent vat, two person's are always needed toward the latter part, one to keep the curd stirring while the other removes the fire, and draws off the hot water. If the task devolves upon one person,

the curd had better be salted with a pailful of the whey still remaining in the vat, on the same principle that the writer in the Dairy Farmer suggests, (to prevent the curd solidifying, and having to be broken up;) but contrary to his theory, the cream will rise just the same on the whey tub, for I tried this method long before I saw his article, and the curd can be made too salt with whey about it, just as we can put too much salt in the brine for our meat barrel, his opinion to the contrary notwithstanding. Again, there is no need to keep three pails of whey around the curd, it takes twice as much salt, which is sheer waste, while the best of the whey is lost, or if put in the whey tub, renders the whole unpalatable for the hogs.

M. J. STEPHENSON.

Carroll Co., Illinois.

For the American Agriculturist.

Making Sugar from Imphee and Sorghum.

Last Fall I made excellent sugar from Imphee, by the following process. A large tub that would hold seven or eight bushels, was fitted with a false bottom about two inches from the lower end or head. This was marked off in squares of two inches, and a gimlet hole bored in each square. Three thicknesses of flannel were then laid in, on which three bushels of bone black were placed, and the tub was then filled with common hard-wood charcoal; this was used for filtering. Next, a quantity of lime water was prepared by putting half a peck of lime into a large jar, and covering it with water; this was done half a day before it was wanted for use. There was also made a strong ooze of white oak bark, by pouring hot water upon it.

After having pressed out the Imphee juice into a two-bushel tub, it was tested with litmus paper, which turned from blue to red. I then added lime water until the litmus paper retained its blue color when dipped in the juice. The juice was then poured into the filtering tub. This process was repeated until the filtering tub was filled. After having let it stand about half an hour, the juice between the head and the false bottom was drawn off and poured upon the top again, and the faucet left open for the juice to run from the filter into the evaporating pan. Half a pint of the tan ooze was added to the juice, and heat was applied until it came nearly to a boil, when the fire was slackened and the whole left to stand twenty minutes. Just before the highest temperature was reached, I added the whites of four eggs well beaten and mixed with a pint of skimmed milk. Having taken off all the scum, the fire was replenished, and the boiling pushed as fast as possible, the scum being removed as it came to the surface. When the syrup was sufficiently reduced, it was removed from the fire, poured into tubs and set aside. I treated five pans of juice in this way, and all crystalized in from ten to twelve hours. I think it gave about sixty per cent of sugar. I tried one pan of sorghum juice, but it did not form sugar; though I have no doubt it would have done so, if only the three or four lower joints of the cane had been used.

To facilitate the separation of the syrup from the sugar after crystalizing, I intend next season to have a large tub made similar to the filtering tub, but with the false bottom six inches from the lower head, and only one thickness of flannel laid upon it. This will allow the syrup to drain into the lower division when it can easily be drawn off.

EZRA HINSHAW.

Keokuk Co., Iowa.

Wine Making.

R. Buchanan, in a former number of the Ohio Valley Farmer, says wine making is as simple as cider making. We give a few extracts from his directions. The well ripened bunches are cut from the vine, and all unsound or immature berries picked out. Each day's picking is mashed at night, by pounding in a barrel with a beetle—stem and berries—or passing them through a mill. The contents are put upon a press, where about one-third of the best juice runs off with it any pressure. After the first pressing, the outer edges of the "cheese" are cut off for eight or ten inches, the parings thrown upon the top, and the screws again turned. This is repeated two or three times, but the juice from the last pressing is dark and astringent, and only capable of making an inferior wine, hence it should be kept separate. The juice from the first pressings is put in large casks, allowing space for fermentation. No brandy or sugar should be added to the best Catawba juice, as it makes a better wine without, and is strong enough to keep well. One end of a syphon is placed in the bung hole of the cask, and the other end terminates in a pail of water. The fermentation commences in a day or two, and the carbonic acid generated passes through this pipe, and bubbles up through the water in the pail. This will show how rapidly the fermentation is going on, and when it ceases. In ten to fourteen days the syphon may be removed, and the casks filled up, and the bung driven in lightly—in a month tightly. In mid-winter the wine is carefully drawn off into other casks, and the lees, added to the pomace of the grapes, are used to make brandy.

The wine will be clear and pleasant to drink in a month or two after the first fermentation ceases. A slight second fermentation takes place in the Spring, and it will only be necessary to loosen the bungs; when it is over, the wine will be clear in two or three months, and safe to bottle, but it is usually better to defer it until the following November. The only secret of wine making is, to have well ripened grapes, perfectly clean press, casks, and everything else used, and having the casks constantly *bung full* after fermentation, so that no air shall come in contact with the new wine.

When to Cut Timber.

The following statements, made by R. C. Kendall in the Country Gentleman, seem to show that the season at which timber is cut, has less influence upon its durability than is generally supposed:

"In 1812 there were built at Sackett's and Store's Harbors, on Lake Ontario, the following government vessels, constituting a portion of the fleet under the command of Commodore Chauncey during the war: the ship Madison, brigs Oneida and Sylph, and schooners Julia, Growler, and Lady of the Lake. These vessels were all built during the Winter, from timber cut and hauled directly from the woods—the Oneida having been finished and launched in sixty days from the time her keel was laid. After the war, all, except the ship Madison, were employed in the merchant service. She was condemned in 1817 as being too rotten for service. On Christmas day, 1825, the Lady of the Lake foundered in a gale, her captain, crew, and 21 passengers going to the bottom with her. She was built from the "leavings" of the Madison, and was perfectly sound when lost. The Julia was captured by Yoe; the Growler was as rotten as muck in four years from the day she was built, while at thirty years of age the Oneida and Sylph were as sound as 'hearts of oak.'

"On Lake Erie, the British flag ship, Queen Charlotte, was built in the Summer time at Malden, from timber cut in the vicinity, and used as fast as cut. Perry's flag ship, the Lawrence, was built at the same time, at Presquisle, from Pennsylvania oak, used as fast as it could be cut and hauled. The Lawrence rotted in five years, while the Queen Charlotte, when sent over the Niagara Falls at the age of *forty years*, was hard and sound. The U. S. frigate Hudson was built in New-York, by contract, from Jersey oak cut during the Summer, and in four years she was condemned as a rotten hulk. The U. S. brig Lawrence was built in Baltimore, by contract, from Maryland oak cut in Winter. She made *one cruise*, and was condemned and sold for $725, being a mass of dry rot.

"I once took a Massachusetts built ship around Cape Horn in her 43d year, built of Massachusetts oak cut in Winter, and I never saw a speck of rot about her. A twin ship built at the same time from Virginia oak cut in Summer, was as rotten as a 'pear' at nine years old.

"Of two large steamers built at the same time at the mouth of Black River, south side of Lake Erie, from timber cut in Winter, one was dead and rotten, or rather rotten and dead, in 9 years; while the other, now 26 years old, exhibits little symptoms of decay; and, as a final example, there is at this time, belonging to Baltimore, a bark trading regularly 'round Cape Horn, and a staunch, safe, sound craft too, (as I know, having made a voyage in her myself,) that was built from summer cut timber in 1811. Her consort, built at the same time, and of like material, went to decay in her 12th year.

"Wherefore, in view of these facts, I argue that waiting for particular signs and seasons in which to cut timber, is much like the popular superstition of sailors against sailing from port on Friday. My advice (not that I insist upon its being universally followed) is, go to sea when you are ready and the wind serves; and cut timber when it best suits your convenience, be it Spring, Summer, Fall, or Winter, as I believe the *constitution* of the tree itself has more to do with its after preservation, than the influence of any particular season has."

Coffee and Cotton in Africa.

To the Editor of the American Agriculturist.

In the February No., you have an article on Coffee, in which I was much interested, inasmuch as I have lived in a coffee country.

I was in Western Africa six years as a Missionary, and have had some opportunity to see and learn something of the country and people, but I wish now to speak particularly of the coffee. Your cuts are good, and your descriptions undoubtedly true as respects the growth of coffee in the countries you speak of, but as applied to Africa not altogether correct.

In Africa the coffee is indigenous—grows wild extensively in the forests and mountains. In many places it is a regular forest tree, ranging from 30 to 75 feet high, and 5 to 15 inches diameter—growing, of course, rather slim and tall in proportion, and bearing comparatively not a large amount of berries. But the grains, (smaller than the cultivated,) are said by coffee drinkers to be of as good a flavor as any other. This is the case in the country back of Sierra Leone and Liberia, as I know from my own observation. The natives do not generally use it, except in the vicinity of settlements of foreigners, but they gather and bring it down for sale.

In Liberia, the coffee is extensively cultivated in farms of from 10 to 100 acres, and the trees are standing in the street and in almost every yard. When cultivated in orchards, they, of course, grow more bushy, but attain the size of apple trees 8 or 10 years old—bearing bushels of berries (instead of 2 to 4 lbs. as you speak of).

The trees are transplanted from nurseries, 8 to 10 feet apart, bear about the 3d year, and increase in amount as they increase in size. In

Bassa County, Liberia, large quantities of coffee are raised and exported.

Cotton also grows wild there, and can be cultivated to any extent. Indeed the world can be supplied with coffee, cotton, and chocolate, from Western Africa. GEORGE THOMPSON.

Blinks from a Lantern....XXVIII.

REVISITS HIGGINS' REST.

My neighbor Higgins, city merchant, country gentleman, importer of rare swine, competitor for prizes at the agricultural fairs, keeper of a thousand hens on a large speculation, still lives, though I have had nothing to say of him for a year past. In my searches for a farmer's wife, I have had to pass him by, though he has hardly been out of mind. He lost his wife a year since, and of course nothing noteworthy in the line of my researches among women, could be expected at his place. A note dated "HIGGINS' REST," received last evening, invited me up to the second-day wedding, of his new wife. I was a little taken aback at the place of date, not being acquainted with any such locality, though my travels have been extensive. On consulting Lippincott, I found Higgins, and Higgins' Point, and several Higginsvilles, but no such place as Higgins' Rest.

At last I thought the usage of the ancients might have come down to modern times, and great men, like Aristotle, Plato, Cicero, Cato, and others, might be giving names to the places of their residence. Higgins surely is man enough, not only to have a local habitation, but to have it named. Why does not Higgins' Rest sound as well as Tusculum, or Tivoli, Tees Water, or Rydal Mount, Glen Mary, or Glen Betsey. It is certainly suggestive and appropriate. Who would suspect that any body else but Higgins and his family lived there? Rest, at least to a city merchant, is suggestive of peaceful scenes in the country, where fat beeves lie ruminating under shady trees, and the sleekest pigs thrust their shortest snouts into the tallest clover.

To-day, as I rode up toward Higgins' farm, to solve my doubts, I found the matter all explained at the gate-way, at least a half mile from the mansion. The highway used to run within a stone's throw of the door, and the first Mrs. Higgins used to delight herself with a full view of all the travel, consisting, generally, of two one-horse wagons, a load of wood, or a hay cart in the course of a summer day. In the time of washing sheep, a flock of those fleecy animals not infrequently swelled the tide of travel that swept by her door. She used to say that it gave great variety to her life "to see the passing." Higgins read in some work on Landscape Gardening and Rural Architecture, that it was not in good taste to have the dwelling immediately upon the highway, that it gave an air of refinement and gentility to a house to seclude it from the world. Higgins, not dreaming that he was already quite enough out of the world, immediately took the hint, and fell into a brown study. He had made some alterations to please his first wife, and himself more particularly. Why should he not slick up a little, and make a genteel place, and give it a name, like the places he had read of in England, to please his intended bride. He could not very well move the mansion, but he could move the highway, by and with the consent of the selectmen of the town. The road could be turned through a valley, at the foot of the swell of land upon which the mansion was built, so as to seclude him entirely from the world. The town fathers were summoned at once, and as Higgins had money, and would build the new road at his own expense, they were made to see that the new road would be shorter than the old one, and of course less expensive to keep in repair. They reported favorably, and the new road was located according to the desire of Higgins, the Rural Improver.

As I drew near the mansion, I was first struck by the entrance gate, a very substantial structure, with stone posts arched with wood, on which flamed in large golden letters, HIGGINS' REST. But for this gilding, the sign would have done credit to a railroad crossing, warning the traveler to beware of the engine.

There is something in this hanging out a sign over a country residence, that I rather like. Higgins is one of those matter-of-fact sort of characters, that leave nothing to be implied or suggested. He has every sheep marked Higgins, in full, and every horse blanket and robe; so that there may be no mistake about the ownership. *H*, might mean Hatch, or somebody else. City people have their door plates with name in full, or in more aristocratic quarters, with only the sirname, as HUBBS, as if there were but one owner of that name, worthy of consideration. Why should not a country gentleman, who has labored assiduously to make the family name honorable, hang it out at the entrance of his domain, as if he had a proper self-appreciation, and was willing to be found by his friends. It might not be known that any dwelling was to be found beyond the gate, if the fact was not announced. Now, every stranger that passes, will have the satisfaction of imagining the splendid abode that lies hid behind embowering trees, and wondering who Higgins is.

I found Higgins had mounted a new hobby, as well as married a new wife, since my last visit. The pear he considered the leading fruit, and he had been making large importations from France of large trees, both standards and dwarfs, for his pear orchard. He can never do anything by halves. In his mania for pears, he had uprooted pretty much every thing else from his fruit-yard. The beautiful row of cherry trees, that had been out five years, were cut down because they did not yield much fruit, not having had time to come into full bearing. The Isabella vines, that only failed to bear and mature their fruit, because they stood in the shade, were also torn up. The plums that failed on account of the curculio, and the peaches that were troubled with the grub, were also exterminated. He wanted some kind of fruit that was not liable to disease, and that could be depended upon for fruit in his life time. The value of trees and vines thus destroyed in a freak, was not less than two hundred dollars, to say nothing of five years' labor lost. He had a few pear trees that had been out a dozen years or more, and were beginning to bear generously. The dwarfs, he was told, he would not have to wait for, and so the most of the three hundred French trees were dwarfs.

The transplanting of course threw the trees into bearing, and like any greedy tyro, he let them bear all they would, the first year. But the ground allotted to the pear orchard, happened to be very rich, and very well adapted to the pear, so that most of the trees made wood plentifully, and the damage was less than might have been expected. Higgins was delighted with the French trees, and thought the Bartletts, and the Duchess pears, must be of another variety, because they happened to be larger than the specimens he had seen grown on poor ground. Improving upon the work of the nurserymen, who had begun to form pyramid trees, he had trimmed all the under limbs, about as high as he could reach. He did not want any underbrush on his premises; he liked to have the fruit up where he could see it. This great change, letting the hot summer sun upon the bark of the trunk, had killed quite a number of his trees outright, but he did not suspect the cause. The broom was his model of a dwarf pear-tree, and he called upon all his friends to admire the spindling handles and the brush at the top. By thus cutting away the wood, of course the remaining limbs were thrown into bearing, and he announced this as a wonderful discovery in horticulture—"Sacrifice your wood and you get fruit," was his golden rule in pomology. I left, thinking HIGGINS' REST was a great country, if not a rural improvement.

Agricultural Literature Extraordinary.

[The following is printed just as received, *verbatim, literatim, et spellatim.* We let it pass for once, but don't want any more such.—ED.]

To the Editor of the American Agriculturist.

In your last number you sed somethin about punctuatin, I beg leaf to add a Word about Spellin and other matters. I keap a Market Garding and have Bean hopping you would let the lite of your favor shine upon me with a Sowth aspick. Taters has receaved my intentions for some time, and the American Institute has bien pleased to Complement me on the inlargement of my kidneys. Goosberries has employed my thots much of lait, and my experience shows that a green Goosberry is of a larger size than a Red, and almost too large for bottlin. Cherries has bust a good deel especially the black arts. Strawberries has magnified considerably, and I spect they will ere long object to lyin too in a bed. Cucumbers are as usual, of a singular sharp flavor, if the vinegar is good. I have an abundance of Red and white currancy, which goes well if enuff sugar is mixed in. My pitches has suffered from the yellows except those trained on the Wall.

Not to be long for your pashance, I have been told of a discovery that if you take a sweet apple and a sour apple, cut em in too, and tie the sweet and sour together and plant them, you will get an apple tree bearin fruit, one side sweet and the other sour. This is no doubt true, bein in the nineteenth century, and it will be a grate benefit to the risin generation. Pees has done well. Grate mischef has been dun by the birds. As to Graps, they dun wel till the Rust came, and besides there was a grate Robin by thievin Boys.

My wife had a Kat that dyed last summer, and was buryed in the Garding, for the sake of enrichment to the goosberrys,—the red kind. Strange to say, this year, the caterpillars on the bushes was harry, and may n't it have been all owin to the Kat? Wishin you improvement in the litteray Department of your paper, I remain

Your obediant sarvint, (not) JOHN SMITH.

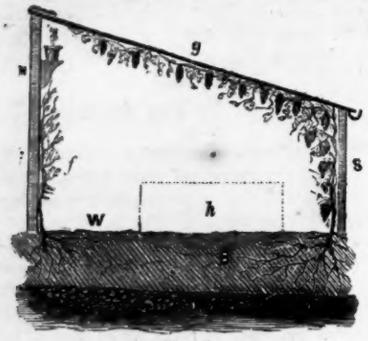


Fig. 1.

Cheap and Effective Cold Graperies, Cold Frames, Hot-Beds, etc., for the Million.

Very few people have any idea of the *small* cost and trouble of providing certain contrivances for facilitating the growth of grapes, various fruits, early vegetables, etc., or of the convenience and profitableness of these structures. Let us look into the matter a little.

A HOT-BED, in its simplest form, is a mass of fermenting manure placed on (or in) the ground and covered with soil, upon which are put various seeds and plants. A bank of earth, or a board box around the sides, and a common window sash of large size placed over the top to shut out frosts, and let in plenty of sun-light, complete the structure. With so simple and cheap an apparatus as this, every family may secure a supply of plants of various kinds, lettuce, cabbages, tomatoes, flowers, etc., to be transferred to the open ground when danger of frost is past; and in this way, at the cost of very little time and money, the table may be supplied with garden vegetables in Spring and early Summer, long before anything can be obtained from open ground culture. The warmth given out to the soil by the gentle fermentation of the manure, acts like magic upon the plants growing above it. The whole operation is so simple that the most unsophisticated cultivator need have little fear of failure, and the advantages are so great that no one should fail to try it. At the cost of three or four dollars, a large sash frame specially fitted for the purpose may be procured of any sash maker. The box required can be constructed by any one who can saw a rough board in two and nail it together at the corners. Hot-beds are specially adapted to February, March, or the first of April, according to the latitude, and we defer further remarks to the appropriate season.

COLD FRAMES are merely wooden boxes (or pits built of sods,) and supplied with movable glass covers. These afford sufficient protection from cold, to promote the early growth of many kinds of vegetables and ornamental plants. By removing or partly removing the cover during warm days, the air within can be so regulated that many plants can be grown which it would be next to impossible to cultivate well in the open ground. Plants started in little earthen pots, or wooden boxes, can be set in these frames for protection at night and in cold frosty weather. By the use of such frames we have this year had many plants in bloom by the time that other seed taken from the same lot, and sown in the open ground, had just begun to vegetate.

COLD GRAPERIES are merely *Cold Frames* of a larger size. In a cold grapery of moderate size and erected at small cost, may also be combined the advantages of a hot-bed, and a common cold frame. Cold graperies are made of various sizes and forms, and, according to their architectural beauty and the area they cover, may cost all the way from $40 or $50 to $500 or more. We propose here to describe a cheap simple form, one easily constructed and adapted to the wants of the great mass of people in limited or straitened circumstances. And to all such let us say that the subject is worthy of study, for these structures are not merely luxuries or conveniences, but are a source of *profit*.

SIZE.—This will depend entirely upon the means and the requirements of the owner. *Fig.* 1 shows a cross section, or end view, of a convenient form. The south wall, *S*, should be high enough above the ground to give about 4 feet clear under the glass. The rear or north wall, *N*, should be 7 to 8 feet high in the clear. The width of the house between these walls may be 10 to 12 feet; 10 feet is wide enough as a general thing. The *length* of the structure may be ten, twenty, or fifty feet, or more.

THE WALLS.—These may be of wood, single or double boarded; or of brick; or of stone. The rear wall, *N*, may be the side of a house, barn, or other structure. In one of the most effective, and yet cheapest cold graperies we have seen, the walls were made entirely of *sods* cut out in square pieces and piled one upon another. In this case posts were driven down at the corners and along the sides, or rather they were set like fence posts, and plates and rafters were spiked or mortised upon the tops after sawing them off square. Sods were then piled up between the posts and around them for the walls. Such walls are rather ornamental, for the sods may be kept green, if they come from strong soil. Salt meadow sods may also be used. They may require some care to renew portions which fail, but they are comparatively durable. (Walls of forts built of this material in Revolutionary times, are still standing.) The enclosed space seems even better adapted to plants, than when surrounded by brick or stone walls. Good strong posts firmly set at the corners, and at needed intervals along the sides, furnish abundant support to the roof.

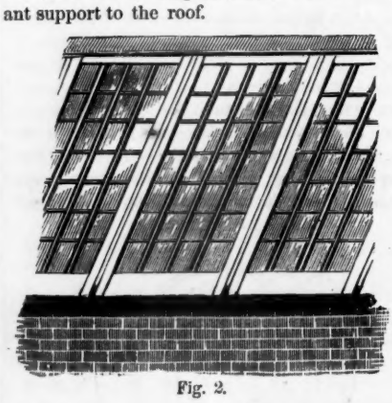


Fig. 2.

THE GLASS COVERING.—This consists essentially of long sashes made with strong frames, and running up from the front to the rear wall, as shown in *fig.* 2. A top view of one of these sashes is shown in fig. 3. The length will depend upon the width of the house, and the width and size of the glass, the strength of the sash, etc. There may be four, five, or six panes of glass in width running up and down the roof in each sash. Generally the narrower the several sashes the more convenient are they for handling. If 6x8 glass be used, five panes would cover 30 inches, and 10 inches more for the frame and string pieces would make a sash 40 inches wide, which is a convenient width, though they would not be very unwieldy with another tier of glass, or the use of glass an inch wider. The *sash frame*, should be made of strong 2-inch stuff, the top and bottom pieces provided with tenons at the ends to fit into mortises in the side pieces. The top piece may be, say 6 inches wide to lay upon the upper plate. The bottom piece should be, say 8 inches wide, to extend over the lower plate and shed off water. The side strips may be 2½ to 3 inches wide, and grooved along the inside upper corners for the glass to lie in. Fig. 5 shows an end view. The middle strips or string pieces need to be somewhat strong, say 1¾ or 2 inches wide, and the two upper corners grooved for the glass. Fig. 6 gives an end view. The *glass* is laid in the frame thus made, beginning at the bottom, and lapping, say ¼ inch upon the next piece, in the manner of laying shingles, so as to carry off water. The glass is first held in place by brads or bits of tin, and then secured with putty. As the lapping of the glass prevents its lying down firmly in its groove, the putty should be put on soft, or better, *bed* the glass in putty, so that it will work around the edge, to fill up the space under the glass. The glass may be common window glass, but should be measurably free from lenses, (oval or round imperfections,) which would concentrate the light upon points, and burn the plants at these points. If clear glass be used, a screen of cloth (sheeting), or a coat of whitewash will be needed to obstruct the free passage of the hot sun's rays. Corrugated or ground glass made expressly for the purpose is now to be obtained cheaply. A cap from the upper plate or ridge pole should project over the sashes to throw the water on to them from the top.

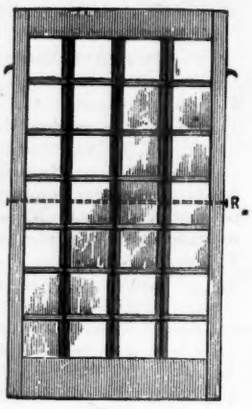


Fig. 3.

Fig. 4.

Fig. 5.

A gutter for catching the water from the sashes, as shown in fig. 1, is a desideratum. This water may be carried to the drain, or it may be conducted into a cistern or into hogsheads within the building, and thus save bringing in water from elsewhere to use on the plants. An iron rod, (*R*, fig. 3,) is passed through the sash to give additional strength.

Rafters are needed between the several sashes. These should be of strong scantling, say 4x5, or better, 4x6 inches. They are to be cut in the form shown by fig. 4. The under corners of the rafters are rounded off as shown in fig. 4, so that the light may pass in freely around them. The little pins or staples projecting from the sides are for holding up the sashes, as described below. The sashes are held in place by a variety of contrivances, such as ropes and pulleys, etc. It is necessary to have them easily moved up and down, and held at different points, so as to let in more or less air as needed by the state of the weather. One of the simplest methods is, to fasten little hooks

Fig. 6.

into the sides of the sash frames near the top. These catch upon the staples or spikes driven along the sides of the rafters. To lower the sash, it is then only necessary to raise it up and slide it down as far as needed, and let its hooks catch upon the staples or spikes at any point on the rafters that may be desired.

THE INSIDE ARRANGEMENT is shown in fig. 1. Grapes are trained up the south or low wall, and then along under the glass. Against the high north wall may be trained grapes, or better, apricots, peaches, or other fruit trees. Shelves for potted plants—early beans, strawberries, cucumbers, etc.—may be arranged along the upper part of this wall. A plank *walk*, (*w*,) should run through the center or nearer the north wall. This should be of narrow plank or strong boards laid ½ or ¾ inch apart, and raised a few inches above the soil—on short cross ties or blocks of scantling or round poles—so as to allow a free circulation of air and light under and between the planks. For Winter or Spring use, hot-beds, (*h*,) indicated by the dotted line, may be placed within the grapery, and along its whole length by simply driving down stakes and setting boards on edge for the sides, or by nailing boards together. These are to be filled with fermenting manure in the usual manner; they afford room for the early starting of a full supply of vegetables, etc. They should be kept far enough from the south wall not to interfere with the grape vines. As soon as they can be dispensed with, the contents are to be removed, or dug into the soil. The space used by the hot-beds may be taken for potted plants in Autumn and Winter.

THE GROUND WORK OR SOIL.—We have purposely begun to build our house at the top, in order to first show the reader that the visible structure, with its frame-work, glass work, etc., is only a simple matter after all. Let us now begin at the beginning, viz., the preparation of the soil. In fig. 1, we have provided for what is technically called the "*Border*," (that is the soil in which the plants grow) entirely *within* the building. Many persons make the building narrower, and place the main border along the outside of the south wall, and bring the vines in through openings in the wall, near the ground. We think it preferable to keep the border on the inside, as we then have it under better control for preserving a more uniform temperature for both roots and branches. With the border on the outside, the roots are kept much colder than the foliage within, especially during Winter and Spring, which is injurious.

B, represents the border or soil for the roots of vines and plants. This should be prepared at least three feet deep, and be provided with good drainage (*D*) at the bottom, having a free outlet to carry off water. The drain may be made of loose stones, broken bricks, or oyster shells, laid in 8 to 12 inches in depth, or even more, covering them with inverted sods or wood shavings. For the soil above (*B*,) fill in a mixture of first-rate surface soil *largely* mixed with sods, rotten manure, and broken or ground bones. The main thing is to secure a good, substantial, but friable soil, containing abundance of decaying vegetable matter, just such as is furnished by rotting sods and leaves, with animal manure enough to give the plants a start at first, and bones to give steady nutriment by their gradual decay.

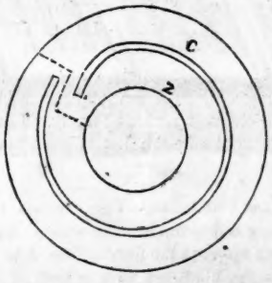
GROWING GRAPES FOR FORCING.—At a recent meeting of the Brooklyn Horticultural Association, Mr. George Hamlyn, stated that he grows all his grapes for forcing, in large pots. He said that he has them in full bearing in fifteen months from the cutting, and as soon as the fruit is gathered, he throws them away and starts new ones in the same pots. By keeping up a succession, he always has plenty of fruit, and in much less time than by the ordinary method. The advantages in pot culture of grapes are readily seen, and this method is growing in favor; but we can not perceive the economy of throwing away plants after one fruiting. By proper pruning the vine may be kept in bearing year after year, and still, if necessary, be confined to a limited space.

Another Fruit Gatherer.

Mr. Calvin Hatch, of Hartford Co., Conn., writes that he first used the fruit picker described on page 209, *July Agriculturist*, but found that from the position of some limbs there was often danger of breaking them, if the fruit were always pulled off. To remedy this, he constructed the picker with a narrow space at *each* end, so that the fruit can be either *pulled* or *pushed* off. He has used one of this form during ten years and likes it much. It has also taken several premiums. Being very simple and unpatented any person can construct one. The rim can be made of strong wire, or hoop iron, with a canvas or other bag suspended to catch the fruit.

Galvanism for Slugs and Snails.

A writer in the London Gardener's Chronicle, thus describes a galvanic circle which he used around choice plants, as a preventive against slugs and snails. Procure a flat ring of zinc, large enough to encircle the plant; make a slit in the ring after the manner of a key ring, so that it can be put around the stem of the plant, and then rest upon the ground. Now twist a copper wire into a ring, very nearly of the same circumference as the flat zinc ring, and putting it round the plant, let it rest upon the zinc. No slug or snail will cross that magic circle; they can drag their slimy way across the zinc well enough, but the moment they come in contact with the copper and zinc at the same



time, they will receive a galvanic shock, and recoil from the barrier. In the above illustration, *z* is the zinc, and *c* the copper wire. The broken line on the left shows the slit in the zinc. *

[The above, if rightly arranged, may answer as a pretty scientific plaything, and as such we let it pass. The "slimy slugs and snails" chiefly trouble us in the strawberry patch; and a nice time we should have of it, if we undertook to double ring each stalk or hill, and to keep boys enough around to hold up the pendant leaves, and the runners, so that the aforesaid "slimy slugs and snails" should not climb them.—*Pub.*]

A Hint on Striking Cuttings.

Messrs. Dailledouze and Zeller, of Queens Co., N. Y., who are among the most successful rose growers in this country, propagate from cuttings in the following manner. For hardy out-door roses, they take cuttings in the Fall, of the present year's growth, insert them in ordinary good soil, in a bed which can be covered by a sash, and leave them until Spring. Most of them will be rooted and ready to plant out as soon as the ground is suitable. For pot roses in green-houses, cuttings are made in the Spring, and put in sand in the green-house, where they grow very easily. All plants, particularly all hardy varieties, if taken up in the Fall and potted, and kept in the green-house until Spring, will yield cuttings which will root much more readily than those taken from plants kept in the open air. The tree pœony, and many other plants which are propagated from cuttings with difficulty, can be grown in this way.

Cultivation of Raspberries.

From the uncertainties attending the culture of *any one* kind of fruit, it is desirable for the farmer and gardener to have as large a variety in his grounds as possible. The smaller fruits, such as strawberries, raspberries and currants, seem to be among the most reliable. With a little care, the raspberry may uniformly be depended on to yield a crop every year. It comes at a season when other fruit is scarce; it takes up but little room in a garden; it is only light labor to gather the berries; the market profits are large; and, for one's own table, the fruit is healthful, delicious, and every way desirable.

The raspberry will grow on almost any ground, but prefers a deep, rich, and rather moist soil. Some market-gardeners prefer, when they can get it, a reclaimed swamp, well drained, for growing these berries on a large scale. The soil is deep, rich, rather moist, and requires no manure, for many years. The raspberry should not be planted in a very dry spot, or immediately under the reflected light and heat of a wall or high fence. If the soil is not naturally deep and fertile, cultivation should make it so. These plants have two sorts of roots, the one going down to a considerable depth in search of moisture, the other running horizontally near the surface. The ground should be prepared so as to unite both of these requirements. If it is not, the canes will make only a moderate growth, the fruit will be smaller, and much of it will dry up before it is fully ripe. The fruit of the garden raspberry should differ from the wild, in size as well as in quality, and this can be secured by generous cultivation. In addition to trenching of the ground, old manure should be applied and well worked in.

Some of the finest raspberries we ever saw, were grown on the North and East sides of buildings, where they had partial shade. And every berry hunting child knows that the largest wild fruit is found on the outskirts of forests, or behind old fences and stumps. Where a position in the garden a little shaded can be had, (though not directly under the drip of trees,) we should advise to use it, and all the more because such positions are not desirable for the ordinary plants of a garden. Experiments have been tried at irrigating the ground during the fruiting

time, and the berries have been much enlarged: in their sweetness probably there was no gain. Mulching has been found very useful.

To the above hints applicable especially to garden culture, we add, for the field, the advice of a large grower, Daniel Hughes, of Haverstraw, N. Y. He says: "A deep, alluvial soil, rich in vegetable mold, will require a light dressing of well rotted stable manure, with a top-dressing of ashes immediately after planting, employing from ten to thirty bushels to the acre. For a light sand or loam, a more liberal dressing should be given: to four loads of vegetable muck, add one load of rich barn manure, and from four to eight bushels of unleached ashes; and if lime is cheap, it may be advantageously used to twice the amount of ashes, together with salt-lye, which is the best addition to the compost that can be used for this fruit. Mulch the roots well, to keep the ground free from weeds; but the grand point to be insisted on, is depth of culture."

Spring is the best season for planting, though Fall will answer, if the roots are well protected in the Winter following. Set them in rows four feet wide. Some growers place them also in hills, three or four canes to a hill, for convenience of tying up to a central stake. A good way of supporting the vines, is to set stout, well braced posts at each end of the rows, also to drive in stakes firmly at every thirty feet in the row, and then to stretch wires from post to post, at about three and a half feet from the ground: the wires also to be fastened to the intermediate stakes. Some persons use two wires. The canes are to be tied up to the wires with bass-matting or soft twine.

In the Fall of each year, the canes should be bent to the ground, fastened down by short stakes, and then covered with a little litter or dirt. The tenderer sorts absolutely require this protection, and all (unless we except the Native Black Cap, and Allen's,) are benefited by it. In the Fall, also, dress the whole ground with manure, to be forked in next Spring. Some advise a mixture of spent tan-bark and the chippings of leather to compost with the barn manure. In the Spring, after hard frosts are over, uncover the plants, and tie up the canes to the stakes or wires. Where the canes are very long, clip their extremities.

VARIETIES: Tastes differ here as elsewhere, but the *Red Antwerp*, the *Hudson River Antwerp*, and the *Brinckle's Orange*, are universal favorites. The *Franconia* is a good market berry, resembling the Antwerp, but firmer, and ripening a week later. *Knevel's Giant* is large, very productive, and particularly fine for preserving. The *Yellow Antwerp* is delicately flavored and sweeter than many others, but not a profuse bearer. *Allen's* is inferior in quality to the foregoing, but is very hardy. *Fastolf*, an English variety, resembles Red Antwerp, but is a little richer and softer.

Notes on Varieties of Raspberries.

To the above, written by an associate, who has had considerable experience in the growth of small fruits, we will add from our memorandum book some notes made in July, while our raspberries were in bearing. The vines referred to were set in the Spring of 1860, in the open ground, all on the same soil, and having had the same treatment:

Franconia.—Canes vigorous; yield well; fruit large, dark red, and of firm flesh and good flavor.

October Yellow.—Canes moderately strong; fruit a beautiful yellow or orange color, of mediumsize, and second or third rate in flavor.

Bagley's Ever-bearing.—Grows very vigorously, rather too much so; fruit not abundant, small, red, not very good flavor; only recommendation is the vigor and hardiness of the plants, and the long continuance of yielding—we find now ripe fruit, flowers, and flower buds.

Catawissa.—Very free grower, and pretty free bearer; fruit medium or small size, dark colored, flavor not the best. Somewhat superior, on the whole, to the common wild black cap.

Merville de 4 Seasons.—Fair grower and bearer; fruit large, light color, soft, and flavor rather insipid.

Red Antwerp (pure.)—Canes vigorous; free bearer; fruit fair size or full medium, solid, and good flavor.

President Cope.—Moderately vigorous; bears moderately; fruit large, red, tender, flavor nothing extra.

Fastolf.—Decidedly a favorite; a free grower and bearer; fruit large and flavor superior, rather too tender to carry to a distant market, but one of the best for home use, and for a near market.

Brinckle's Orange.—Very good; free grower and bearer; fruit good size, beautiful orange color, somewhat solid, flavor superior.

Victoria, or *Belle de Fontenay.*—A free grower, very hardy, and free bearer; fruit large, red, solid, good flavor—perhaps not quite equal to the Fastolf. This is a new variety, imported, we believe. They chanced to be left entirely unprotected during the last cold Winter, and suffered not the least, but are bearing abundantly, and have fruit just setting for a continuance of the bearing season; it is apparently one of the most promising for general culture.

For the American Agriculturist.

Can Fruit be grown in Minnesota?

Trials with Grapes, Pears, Cherries, Blackberries, etc.

I think that the people of Minnesota generally are too ready to accept the opinion that fruit can not be grown here, without sufficiently experimenting. I came to Minnesota four years ago, from Connecticut, where fruit is plenty, and I was not satisfied to believe that fruit could not be grown here, until I had made the experiment. I have, during that time, ripened three varieties of grapes—amounting to over a bushel in all. They were the Isabella, Catawba, and Diana; I have trained the Isabella upon trellises, and they have grown annually a length of twenty feet—requiring cutting back in the Autumn, of course. The other varieties I train upon the renewal system. I have also under cultivation the Delaware, Hartford Prolific, Anna, Rebecca, Chappala, Clinton, Arkansas, and some seedlings I am experimenting with, all of which are flourishing finely. I was told that they would die the first Winter, but I have bound them in dry straw, and laid them down, and they have come out fresh and bright every Spring.

I have also a number of fine pear and cherry trees growing, all of which I find no trouble in preserving by binding the trunk with straw rope. I have two rows of New-Rochelle blackberries 70 feet long, from which I picked a bushel of berries last year, it being the second year of their growth. They require protection during Winter. My course with them is as follows: In the Autumn, after cutting them back sufficiently to allow them to harden, I disconnect them from the wire to which they have been trained, and remove the earth from the base sufficiently to allow them to bend without breaking; then bend them down close to the ground, and throw some straw over them; a few shovelfuls of dirt upon this completes the work. They should be left to stand as long as possible, in order that the wood may harden, yet care should be taken not to work at them when frozen, as there is great danger of breaking the lateral branches, which are to produce the fruit the next season.

As I have but two acres of ground for all my gardening and fruit-growing purposes, my experiments with trees are necessarily confined to dwarfs. They have all, thus far, been highly satisfactory, and I think with *care* fruit can be grown with good success in Minnesota. In a recent trip through the country I noticed many fine orchards started, which promise well. I was also highly pleased to find in not a few farm-houses in Minnesota my old friend and constant companion, counselor and guide, the *American Agriculturist.*

J. F.

Mushrooms for the Table.

Many persons refrain from eating the mushroom, through fear of its poisonous qualities, and others through ignorance of its value for culinary purposes. The true mushroom, (*agaricus campestris,*) is not poisonous. But there are several species of fungi resembling it, popularly called toad-stools, which are hurtful. The true article may be distinguished from the false, by its small, round, brownish cap, stem from two to three inches high, and its gills a fine pink hue; while the toad-stool is simply dark, dingy-colored, five or six inches high, is slimy to the touch, and has rather a disagreeable odor. The toad-stool grows generally in the forest, while the mushroom is always found in rich, open pasture lands.

Of the true mushroom, Fessenden says there are about three hundred species native to Great Britain. The months in which it most abounds are August and September; but it is grown artificially, both in England and this country, all the year round, and forms a lucrative crop to the market-gardener. In its taste, it approaches the nearest to animal matter of any vegetable production. It makes an excellent catchup, is highly esteemed as a pickle, and when stewed in rich gravies, makes a fine relish.

As the mushroom is not found wild, except for a short period, we will give our readers the common mode of domestic cultivation. It is propagated by what the gardeners term *spawn.* This is a white, thready substance, found in the Summer in old pastures where the mushroom is wont to grow, in masses of rotten horse dung, sometimes under stable-floors, and in the remains of spent hot-beds. Only a small quantity is needed to begin with. Prepare a compost, of equal parts of fresh horse manure, cow dung, loam, and cut straw. When mashed well together, and partly dried, cut them into square blocks, like bricks, and then insert two or three pieces of old spawn, say of the size of a walnut, into different parts of each brick. The bricks may then be left a few days to dry. After this, place them in a gentle hot-bed, which will cause the spawn to penetrate and cover each block. These blocks will preserve their vegetative powers for several years. These blocks can be purchased ready for use, at many of the leading agricultural and horticultural establishments.

We are now provided with material for growing mushrooms the year round. Suppose we wish to raise a crop this Fall. Prepare a bed for the purpose under a shed or in a dry cellar.

The bed may be four feet wide, and eight or ten feet long; this will supply an ordinary family. Let the sides rise perpendicularly for one foot, and then slope gradually to the center, say a foot higher, making four sloping surfaces. This bed should be of horse-dung, well forked up and pressed down equally on all sides. Cover it with straw for ten days, after which, the excess of heat having passed off, the straw may be removed, and an inch and a half of rich mold put on. Break a block of spawn into pieces the size of a chestnut, and plant them in this mold, in rows six inches apart. One block will plant a surface four feet square. Then cover with another inch of loam, and place over this a layer of straw, several inches thick. The after cultivation consists in keeping up an even temperature, say about 65°, and in watering the bed occasionally if it becomes dry. The plants will appear in four or five weeks, and in two days after their first appearance, will be ready for use. The crop may be gathered as often as desired, through a period of several months.

Our hints will not be satisfactory to the ladies, unless we add a few words in reference to preparing the mushroom for the table.

For *broiling*, cut off the stems, wash the caps in fresh water, place them on the gridiron over a slow fire; season with pepper, salt, and butter, and serve up like broiled steak. For *stewing*, stem, peel, and wash, then lay in a sauce-pan, partly cover with water, and add a little salt. Serve up on toast, adding butter, pepper, cinnamon, and wine if taste and conscience approve. For making a *catchup*, put down the heads in layers of salt for one week, then mash them and add cinnamon, pepper, and cloves, at the rate of one teaspoonful of pepper, a quarter of a teaspoonful each of cloves and cinnamon, to a quart of mushrooms, mix well together, and set the vessel containing them into boiling water for three hours. Then strain through a coarse cloth, and boil again for half an hour, skimming off impurities. Bottle and cork tight, and stow away for future use.

To Grow Verbenas.

Conflicting reports reach us, this Summer, respecting the verbena. In some quarters, we are told, the plants have rotted off, in others they have burned out, in others succeeded moderately well, in others insects and mildew have infested them, and in still others they have been a blaze of bloom all Summer long.

Of course, we can not answer all the numerous inquiries as to the cause of these varying experiences. But a few general principles may be stated, which apply to a multitude of cases. As a general rule (not forgetting the exceptions,) native seedlings thrive better in our climate than foreign varieties. And, since our Summers are confessedly better suited to the verbena than the English, and as seeds ripen here so readily, we see not why we should depend on foreign sources for our new plants. Why, indeed, should we not send our seedlings to the foreign market?

Again, success with the verbena depends much on the character of the soil. It should not be rich. This plant dislikes manure; and besides, if the soil is quite strong, we get a great growth of vines and only a few blossoms. A common sandy loam is what is wanted; or, to follow high authority, "two parts loam, two of leaf-mold, with an admixture of sand." Let the border be dry, and open on all sides to the sun. There is, also, this peculiarity to be noted, that verbenas seldom succeed well in the same ground more than two years in succession. Either the plants should be set in new beds every other year, or the old beds should have the soil entirely renewed.

Many persons get only small, feeble, rusty plants from the florist, and then set them out quite late in the Summer. Instead of this, vigorous plants should be got early in the Spring, then shifted into larger pots, be kept in vigorous growth, and be exposed gradually to the open air for a week or ten days before being bedded out. They are hardier than most other bedding-plants, and may be set out early. Thus managed, they will become large plants early in the Summer, and will make a vigorous show of flowers. This last hint we consider of great importance. Of course, the shoots must be pegged down as they grow. With these directions all followed out, success may at least in all ordinary cases be depended on.

House Plants for Winter.

Many of our readers, we hope, will give themselves the pleasure of having a few plants in the window to cheer the long Winter season not far before us. No passer-by sees flowers peeping through the frosted window, without a new feeling of cheerfulness, and without reflecting that such a household possesses a certain sort of refinement and happiness which others do not. An old German poet sings,

> "A flower do but place near thy window glass,
> And through it no image of evil shall pass."

But we do not care, just now, to plead for window plants. We know that many of our readers are determined to treat themselves to this luxury, and will thank us for any hints that may be given.

It is not a good practice, generally, to use plants for Winter blooming, which have been in flower throughout the Summer. The attempt to do so will be only partially successful, at best, and the plants will suffer from the unnatural forcing. If such are to be used at all, they should be taken up quite early in the Fall, (say Sept. 1st,) potted and set away in partial shade, to rest. On the approach of frosty nights, they should go into a cold frame or other sheltered spot, and rest for another month or two. By December, or January, they may be brought into a warm room, and encouraged to grow.

A better way, however, is to have two sets of plants, the winter-bloomers being kept in a comparatively dormant state during the Summer. They may be plunged in coal ashes, on the north side of a building, and should receive only just enough water to keep them from wilting. A few plants, like the Petunia and Scarlet Geraniums, will bloom a large part of the year. To prepare them well for Winter flowering, begin early in September; cut a circle around each plant with a sharp spade, severing the roots so that they can be got into the intended pot. Now, water the plant well, and young roots will begin to shoot out within the proposed ball of earth. In a month's time, cut back about half of the top, and new shoots will strike out, and flower buds soon appear. If this treatment is neglected, and the plants are taken up at the beginning of Winter, it will take a long time for them to recover, and their blossoms will not appear until nearly Spring. If verbenas are wanted for Winter blooming, they should be got ready at once. Find runners that are well rooted, cut them off above and below a joint, and pot in a sandy loam. Plunge the pots in the border for a few weeks until the plants are well established, then remove to the frame and subsequently to the parlor window.

Success in window gardening depends also upon the right management of light, heat and water, and air, etc., but upon these points we can better enlarge at the appropriate time.

Look to the Dahlias.

They have now made a rampant growth, and are beginning to bloom. As high winds prevail during this month, special pains will need to be taken to prevent their breaking down the plants. See too it that the central stake is strong and driven deep into the ground. Tie up the main stalk to the stake with good stout cords. If one would be doubly sure, let him set three good stakes five or six feet high, in a triangle around each plant, then take slender hoops and encircle the stakes at the middle and top of each plant. The lateral branches will then lean upon the hoops and stakes, and none be split off. The foliage of the dahlia will soon conceal the hoops.

If the season be very dry, resort must be had to watering. First, give the ground a good hoeing, then water thoroughly, and follow this with a mulching of hay or straw. Have an eye to insects, for during these dry sunny days, they will be on hand. The grub which eats through the stalk, is the worst fellow we have to deal with, as he can seldom be found. The bugs which eat the young buds and the rays of the opening flowers, are vexatious, but can be subdued by—"eternal vigilance." Look over the plants early in the morning, and catch them (if you can) between thumb and finger. Dust the leaves with ashes or air-slaked lime, while the dew is on. Syringe the foliage with an occasional dose of soapsuds. This should be followed with clear water.

Position of Flower Beds.

On visiting a friend's garden, recently, he asked us why it was that two flower beds which he pointed out, and which lay near together, should look so different. The soil in both was alike, and the plants in them quite similar, yet one presented a glowing mass of bloom, while the other made but little show. What could make the difference?

As the path from which we viewed them ran East and West between the beds, it occurred to us that perhaps the difference was owing to the different points from which the flowers were viewed. And so, stepping round to the *South* side of the disparaged border, the scene was changed—the blossoms upon it were as brilliant as those on the other. Many flowers turn their faces to the sun, and hence, if the spectator stands on the North side of the border, he sees but little of their beauty. The discovery of this fact has led us, this year, to change the position of two verbena beds, much to their improvement and our own gratification.

Another hint: It is not essential that all flowering plants should have a back-ground, but they are much benefited by it. We were much struck, many years ago, in Mr. Downing's grounds, by the brilliant effect of a mass of scarlet geraniums set before a group of evergreens; and we annually reproduce that scene in our own garden. This end can be reached by setting small shrubs in the rear of a flower-border, and blooming plants in front.

If a man cheats you once, blame *him*; if a second time, blame *yourself*.

Fig. 1.

Flowers in the House—How to Keep Bouquets—Table Decorations.

Beauty need not cost money. Mr. Broadacre's fine pictures in gilt frames, for which he paid thousands of dollars, can not compare for skill or elegance with a bouquet gathered from the Widow Small's garden; and the most beautiful sculptures are put to shame by the delicate tracery of a wild flower. When it is so easy to

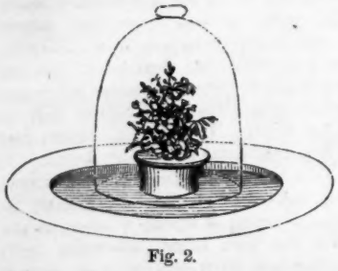


Fig. 2.

gratify and cultivate the love of the beautiful, it amounts to a positive duty. A man or a woman has no right to grow up coarse when the Creator has surrounded him or her with refining influences. We never see a man with a nosegay, or a single rosebud in his buttonhole without thinking better of him; it is like the gleam of light through a crevice, that tells of warmth and good cheer within. This part of the subject is tempting to the pen, but limited space compels us to come at once to the practical. First then, through the season of flowers use them as ornaments of the dwelling. Keep a fresh bouquet in the living room, for your own gratification, and if flowers are plenty, in the parlor for the pleasure of occasional visitors.

To renew the flowers daily, is quite a tax on a small garden, which ought not to be entirely despoiled, for beauty is wanted *around* as well as *in* the dwelling. By a little management, cut flowers may be kept fresh several days. The cause of wilting, is loss of the water which fills the tissues of the leaves. Evaporation goes on as rapidly as from the growing plant, and there being no roots to supply the loss, the petals and other organs soon shrivel. This is partly remedied by placing the stems in water, but to prolong the period of preservation, it is necessary to hinder the evaporation from the plant. This can be done very readily by setting the vessel containing the flowers on a plate or pan containing a little water, and inverting a bell glass or jar over the bouquet. Water enough should be kept in the plate, to rise above the edge of the bell-glass. With this arrangement, as shown in Fig. 2, the external air is excluded, and the air within the bell-glass soon becomes saturated with moisture, so that evaporation from the flowers is prevented, and they remain plump and firm until chemical changes cause decay.

It is often desirable to carry or send flowers to a distance, but they give little satisfaction if they arrive faded and wilted. They are often surrounded with moss, cotton, or soft paper, or a handkerchief is tied over the bunch to preserve them from injury. Such treatment only increases the difficulty. The covering of cotton, etc., readily absorbs the moisture of plants, and they must droop. If to be carried far, let them not be made into a bouquet but laid loosely in a box with a tight fitting cover. Wood is better than paper, as it absorbs moisture less readily. Line the box with folds of wet flannel, or paper, or place in it a sponge saturated with water. In absence of any thing better, throw in some fresh succulent leaves, or even grass, which will give off moisture and partly prevent evaporation from the flowers. For botanists or others who wish to preserve specimens from wilting, an excellent article is a bag of India rubber cloth, made like a traveling bag, or so that the mouth can be closed tightly, which will ensure the desirable moist atmosphere.

Flowers are nowhere more beautiful than when used as decorations for the table. Eating and drinking are purely animal exercises, and

Fig. 3.

the pleasures they bring are lowest in the scale of enjoyments. We should seek to surround them with refining influences that shall minister to the better nature, and keep us up to our proper level: and what can be better fitted than flowers to recall the thoughts from groveling associations with meats and drinks? These

Fig. 4.

ideas are appreciated and acted upon among the cultivated of every country. Flowers mingled with fruits as table decorations, are found at all great entertainments. Why should they not form a staple at our meals? It is pleasing to know that taste in this direction is being encouraged and guided to the right channel. In England the subject has been thought worthy the action of the Royal Horticultural Society. Prizes have been offered and awarded for table decorations. The accompanying engravings, Figs. 1, 3, 4, are specimens of the designs of this kind which took prizes at the June exhibition of the Society. They ranked in the order of the numbers, Fig. 1, taking the highest premium. The editor of the London Gardener's Chronicle says of the decision of the Committee, "The merit of the skillful arrangement to which the first prize was awarded, has been much discussed, and those who can not perceive how superior graceful form is to mere heaps of color, have not hesitated to condemn the judgment that conferred the premium. To us it seems impossible not to see that, however handsome the other groups may have been, they were unmistakably inferior to the successful piece. For how was the beautiful effect produced? Not by masses of flowers of priceless value, quite unfit for the purposes of a dinner table, to last for a few hours; but by some Ferns, some Lycopods, a few Roses, some Forget-me-nots, Vine leaves, and small clusters of grapes. Any body with the most modest income, could imitate this."

The above remarks and illustrations are, of course, intended to be only suggestive. Deco-

rations of this kind may be made of endless variety—what we desire is that they may be more frequent; that every house, however humble may be beautified and blessed with these and similar attractive objects which are within the reach of all.

Love of the Garden.

Our roll of subscribers contains—we are happy to know—many clergymen; and it gives us great pleasure to receive from them, as we do, frequent words of encouragement and approbation. At one time, a letter speaks of our articles on fruit-growing, at another, on farm management, and again on our Domestic and Youth's Department. To-day, a friendly word comes for the flower-garden and lawn, and on one letter page, the writer discourses thus pleasantly:

"I hardly know why it is, but my love of gardens and of universal nature increases with my age. Sometimes, I fear that my senses of sight and smell and hearing are getting a little blunted, yet when I go into my garden, the freshness of youth returns to me. The fragrance of flowers, and their forms and colors, are as delightful as ever. Trees and shrubs and vines and verdant grass have an unfading charm, and I trust they will ever have. A few roses, fresh plucked every morning by my daughter, adorn my study-table, and greatly help forward my sermon. A cluster of grapes or a pear from the garden often refreshes my lips fevered by studious toil, or when exhausted by preaching.

"With rural comforts and pleasures at command, of which these are only a specimen, it seems strange to me that so many persons willingly deprive themselves of their enjoyment. The "almighty Dollar" (if we may so speak without blasphemy,) is the idol of not a few, and just enough to eat and drink, is the supreme good of many others..... The influence of your *Agriculturist* in inspiring a love, and an intelligent love, of gardens and refined country life, is valuable beyond all calculation. Go on and prosper!"

Our clerical friend will please accept our thanks for these words of encouragement and approval. It is a source of much gratification to us to know that our pages exert so salutary an influence. It is in our hearts to do still more to inspire our countrymen and country*women* with a love of the true and the beautiful; for not only does such a love make its possessor happy, but it improves him. God made this world, with all its beauty included, and He is pleased to have us love and study what He has created. Let us, then, strive to adorn our homes with every possible comfort and refinement, and, not the least, with rural embellishments—with trees and flowers, and plots of verdure, and orchards and gardens.

To Copy Leaves of Plants on Paper.

Take a sheet of paper, and rub over it the thinnest possible film of oil; then hang it up in the air to partially dry the film. Next cover the paper with lamp-black soot, or soot from a large tallow candle, by holding it extended over a smoky flame, and pressing it gently, but with care, *into* the flame, in order to cover the paper with smoke, but of course so as not to set it on fire. Having done this, put it into a damp place to take the curl out, and when cold and flat, lay on the smoky side the leaf intended to be impressed or printed; then press with a soft wad every part of it, so as to take up a portion of the black: this finished, place the leaf gently on a sheet of drawing-paper, and put a piece of paper and a weight of books, or pressure, upon it. When the whole is removed, there will appear a very beautiful, black impression, resembling a lithograph of the leaf so treated, showing its true line, its veins and fiber, quite distinct and true to nature. Fleshy leaves of annuals and similar plants, are better to copy than evergreens. For a simple method of taking impressions which possess the advantage that they may afterwards be colored by hand, instead of lamp-smoke and candle-smoke, printers' ink may be used, as was done by Kniphoff in his celebrated botanical work, which extended to some dozen volumes folio, and was published more than a century ago, and was the first successful attempt at nature-printing on a large scale. Impressions taken in printers' ink may also be colored, and Kniphoff's work was published both plain and colored.—*Septimus Piesse.*

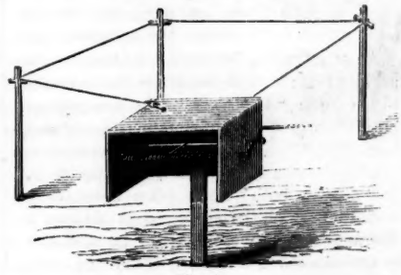


Fig. 1.

Apparatus for Washing Day.

To the Editor of the American Agriculturist.

The descriptions of improved apparatus of various kinds which I find from time to time, in the *American Agriculturist*, often make my pocket ache. But you know that money is by no means plenty among most farmers, and economy is one of the first necessities of successful farming under ordinary circumstances. Therefore we have to exercise our ingenuity, and make the best substitutes possible, for those desirable implements we can not afford. I send you the description of two articles which have long been in use in some sections, but which may be new to many of your readers. Our own are of home manufacture, and can easily be made. The first, Fig. 1, is designed to remedy the "clothes line nuisance," which you described in the July No. The illustration needs little explanation. It consists merely of a small box, in which is placed a roller, with its ends running in auger holes on the two sides. At one end a crank is attached, and the box is then securely fastened with screws through the front board upon the top of a post. Three other posts are set to form a square or parallelogram with the first. The clothes line has one end fastened to the roller, and on the other end an iron ring is tied. It is wound upon the roller by turning the crank. When wanted for use, the loose end is carried through an opening in front of the box, then around the three posts, and back to the top of the box, where it is secured by a hook which drops in the ring on the end of the line. To keep the line in place, the crank is turned until it is tight, and then held by a pin inserted in the side of the box. After the clothes are taken in, the pin is removed, the hook slipped from the ring, and by turning the crank, the line is easily wound upon the roller, secure from being wet, and ready when wanted. The illustration is magnified, and the back board of the box left off, to show the roller. A bottom may be added to the box, if desirable, which will give a convenient place for keeping the clothes pins.

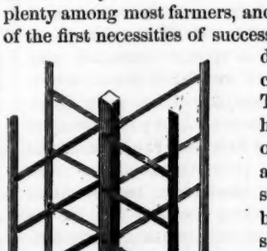


Fig. 2.

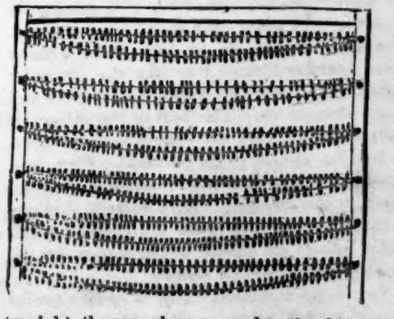
Fig. 3.

Fig. 2, represents a folding clothes horse, which takes up very little room when not in use. It is made with a center post and four uprights, and slats running at right angles to them. The pieces may be of any desired length. Each horizontal slat is screwed to the post and to the upright: the holes in the slats are made a little larger than the screws would require, so that they form pivots on which the slats turn. On each bottom slat is a staple to receive a hook fastened to the middle post, by which the whole is held in place when used. Fig. 3, represents the apparatus, nearly folded together. The folding makes it convenient where house room is scarce.

Cheap Apparatus for Drying Fruit.

A very simple apparatus for drying apples was used by our grandmother, and for aught we know, by *her* grandmother, and when a boy we made them for home use, but we have seldom seen them in use recently. The following sketch illustrates the apparatus referred to. It is a wooden frame made of two upright strips, about two and a half or three inches wide, and nearly an inch thick, joined at top and bottom by two cross pieces about three feet long. One or two more cross pieces may be put in to strengthen it if desirable. Common shingle nails are then driven into the uprights about four inches apart, and the strings of apples are hung across upon these nails as seen in the figure. They are so simple, that any apt boy can make one in half an hour.

They save the labor of moving the strings separately, and enable the housewife to carry on the process of drying in stormy weather, by the fire, when the fruit might otherwise spoil. In sunny weather, the frames can stand against the south side of the house, or if the fowls are troublesome, they can be hung up on nails driven for the purpose. In case of a rain, or a



frosty night, they can be removed to the kitchen in a very few moments without taking the strings from the nails. They can be put near the fire, and the drying process can be carried on very rapidly. Each frame six feet long will accommodate about 18 strings of apples, pears, peaches or other fruit. They will save

more than half the labor of the ordinary process of drying, and will enable the housewife to apply artificial heat whenever she desires.

For the American Agriculturist.

Packing Apples in Leaves.

Last year, just as we had finished apple gathering, I read in some newspaper, (not the *Agriculturist,*) that it had been 'proved conclusively' that the one true way of keeping apples was, to pack them in dry forest leaves. I gathered leaves accordingly, upon a dry windy day, and packed three barrels the next day, all Spitzenbergs, hard and sound, placing them according to directions in a cold, dry place. One day in January I went down to see how my treasures were keeping. Rotten, one third of them already! green and moldy, many of the leaves actually wet. Too damp when put up evidently. Next season I mean to put apples and leaves enough to fill one barrel in a warm room for a few days, where they will become externally quite dry. I shall then place them in a shed where vegetables *unprotected* will freeze. What chance have I of finding my apples sound if I leave them undisturbed till the last of April? Can any readers of the *American Agriculturist* tell me?—[Not much.—ED.] LOUISE.

Cure for Whooping Cough—A Second Attack, and the Remedy.

We have seen it stated in some recent medical journal, (name not remembered), that a considerable number of cases were on record where Whooping Cough had been either cured or greatly modified, by giving the patient from one to two tablespoonfuls of strong coffee three or four times a day. The coffee must be pure, fresh burned, and fresh ground, as strong as water will make it, and sweetened, but taken without milk. The amount to depend upon whether the child is accustomed to the use of this beverage or not. (No judicious parent will allow a young child to take coffee at all, except as a medicine.) We can not vouch for the remedy; it will be little trouble to try it, though there might be risk in giving too large doses of very strong coffee to a young child.

We have had a little experience with this disease, which may be interesting to others. When about 30 years old, we had a *second* attack of whooping cough, taken when debilitated with long watching over a child that died from this disease in combination with inflammation of the bowels. Anxious friends declared that we were fast going to the grave with "consumption," and we were booked for a tour to the Southern Islands.

As we had certainly had the whooping cough in childhood, and as the popular opinion was that this disease never attacks one the second time, the real trouble was not suspected—not even by our physician. Happening to come under the inspection of Dr. Worthington Hooker, of New-Haven, at a clinical lecture of the New-Haven Medical College, he pronounced our severe coughing of 8 or 10 hours in 24, "a second attack of the Whooping Cough." He at once prescribed a "Noel's Plaster," 4 inches wide, to be placed along the whole spine, from the back of the neck downwards, with assafœtida 2 inches wide along its middle part. An assafœtida pill, of moderate size, was to be taken morning, noon, and night; and five drops of "Fowler's Solution of Arsenic" to be taken three times a day. The directions were followed for a week; our "consumption" departed; the distressing cough was broken off "as short as a pipe stem"; and from the hour of beginning to use the prescription to this day, we have not had so much as a single "hack" of a cough, except from an accidental obstruction of the throat by dust or other foreign matter. Both the assafœtida and the arsenical solution are specifics for spasmodic coughs, and the triple application, above referred to, was a pretty severe one; but the long continuance, and the severity and emaciating character of the cough, called for vigorous medicine; and the result was most happy. We would not, of course, advise others to follow the prescription except under the advice of a competent physician, but those afflicted with a first, or a suspected second attack of whooping cough, might do well to show this chapter to their physician at least.

A $40 Cure for Stammering

A correspondent of the *American Agriculturist* asks us, first: if there is any reliance to be placed in a certain "Professor" who advertises "to cure the worst cases of stammering, or 'stuttering,' for $40"; and second, if we can advise any remedy, as she has a son badly affected. We will answer both questions by saying that the secret for which the $40 is asked, has long been known, though we have had no occasion to verify its utility; and further, that she can have the secret from us for $1, viz: the $1 she has already paid for the *Agriculturist* this year. Here it is: Let the stammerer begin at once to beat time for *every word he utters*, either in talking or reading, just as if singing the words. If this does not stop the hesitancy, then try beating time to every syllable, and afterwards gradually run into beating for words, and then for sentences. The beating can be done with the foot, or with a hand, or one finger of the hand, or by striking the finger and thumb together. Thus: "When (beat) in (beat) the (beat) course (beat) of (beat) hu- (beat) man (beat) e- (beat) vents, (beat) etc." A persistent course of measuring the words until the stammerer can read and talk straight forward, though slowly, for an hour at a time, will doubtless overcome the habit of stammering. We do not say that this will always effect a perfect cure in the worst cases, where the stammering or habit has been long established, but from the nature of the defect, it must be greatly modified, if not cured. And at least here is all you will get if you send your $40 to the "Professor," who has no more skill, and no more right to the "secret" than we have.

For Consumptives.

Cream versus Cod-liver Oil.

During a few years past "cod-liver oil" has been the great popular panacea for consumption; tens of thousands of barrels of so-called cod-liver oil have been sold at enormous prices, and consumed. We say "so-called" for it is quite certain that a very large proportion of the material sold under this name has been mainly *lard oil.* We think little harm has been done by the deception, except by the cheat involved in selling for $1 per pint bottle, an article costing less than $1 a gallon. There is no doubt that thousands of cures have been effected by the use of both the pure cod-liver oil, and the spurious lard oil. Faith in the article (that is in the label on the bottle, and in the advertisments of the sellers) has in many cases dispelled fear and started the patient on the high road to health; while the real nourishment afforded by the oil is often just what is needed by the dyspeptic patient suffering for lack of nutriment. Indeed, it is believed that to the carbonaceous elements of the oil, which are essential to good respiration, is mainly due the benefit that has been derived from the much lauded cod-liver oil. Acting upon this belief, one of our first physicians, Dr. Alonzo Clark, who is perhaps the highest authority of our city, has proposed the use of pure sweet cream as a substitute for the oil. Cream is essentially an oil, very similar in its composition to the cod-liver oil, lard oil, and others of like character, while it is far more palatable, and vastly cheaper. The Medical Reporter says that a consumptive patient, now under treatment, is taking cream with better effect than was experienced under the cod-liver oil previously tried.

Our advice is, for all who have, or think they have consumption, to adopt a cream diet. Eat the pure sweet cream abundantly, as much of it as the stomach will digest well. Eat it alone, on bread, with baked sweet apples, and at every meal. Eat it *believing* it will cure, and we doubt not that it *will* prove quite as effective as the purest cod-liver oil that can be bought.

What is in the Bedroom?

If two persons are to occupy a bedroom during a night, let them step upon weighing scales as they retire, and then again in the morning, and they will find their actual weight is at least a pound less in the morning. Frequently there will be a loss of two or more pounds, and the average loss throughout the year will be more than one pound. That is, during the night there is a loss of a pound of matter which has gone off from their bodies, partly from the lungs, and partly through the pores of the skin. The escaped material is carbonic acid, and decayed animal matter, or poisonous exhalations. This is diffused through the air in part, and in part absorbed by the bed clothes. If a single ounce of wood or cotton be burned in a room, it will so completely saturate the air with smoke that one can hardly breathe, though there can only be one ounce of foreign matter in the air. If an ounce of cotton be burned every half hour during the night, the air will be kept continually saturated with smoke unless there be an open door or window for it to escape. Now the 16 ounces of smoke, thus formed, is far less poisonous than the 16 ounces of exhalations from the lungs and bodies of the two persons who have lost a pound in weight during the eight hours of sleeping, for while the dry smoke is mainly taken into the lungs, the damp odors from the body are absorbed both into the lungs and into the pores of the whole body.

Need more be said to show the importance of having bedrooms well ventilated and of thoroughly airing the sheets, coverlids, and mattresses, in the morning, before packing them up in the form of a neatly made bed?

Cheap Clothing—A Dear Bargain.

To the Editor of the American Agriculturist:

Being at one time on a visit in New-York City, I determined to improve the opportunity to buy some clothing, which of course would be much cheaper there than nearer home. Accordingly I visited an establishment whose advertisements I had often read, and looked at their stock. I wanted garments for every day wear, and therefore was not particular about the fineness or finish, and was not long in purchas-

ing a coat and overcoat at what appeared to be remarkably low prices, viz.: $9 50 for the two. They were of thick heavy cloth, and apparently well made, and I went home much pleased with my bargain. Upon showing them rather proudly to the tailor who had usually made my clothing, he smiled, and said "shoddy."

"What's *shoddy*?" I asked.

"It's worn out cloth made over again," was the reply. And I soon found that the cloth had indeed been worn out before I bought it, for in a very few weeks, the garments were out at the elbows, split open in the back, and ragged in the skirts. I have since learned that the tailor was right. Shoddy is made of old woolen rags, old stockings, etc., which are picked to pieces, a little new wool is mixed in, and then spun over and woven. By careful dressing, a very fair looking cloth is made, but the *wear* was mostly taken out of it the first time it was used. Perhaps my experience may be of service to some others who may be tempted by a low price to buy a dear bargain. COUNTRYMAN.

St. Lawrence Co., N. Y.

Keeping Milk in Hot Weather.

When first drawn from the cow, 1000 pounds of milk contain nearly half a pound of free soda. (The average amount is 42-100ths of a pound, or 2940 grains—about 6 grains of soda, by weight, to the quart of milk). This alkali serves to keep the casein, or curd, in solution. After a time, lactic acid is produced, which neutralizes the alkaline soda, and the casein being no longer held in solution separates, or "curdles." When quick curdling is desired, as in cheese making, an acid is added, or what is the same thing, rennet is used, which acts as a ferment rapidly producing an acid. When it is desirable to keep milk sweet, or uncurdled, we have only to stir in a little extra soda, say a bit of cooking soda hardly so large as a common pea for a quart of milk—the amount to depend upon the weather, and the time the milk is to be kept. The small amount of soda required will not affect the taste of the milk, or its healthfulness—it only serves to keep it in its *natural* alkaline condition.

Removing Stains.

Ox-gall is an excellent article for removing oil stains from delicate colored fabrics. It often fixes and brightens colors, but will slightly soil pure white materials.——Alcohol, or strong whiskey, washes out stains of oil, wax, resin, and pitchy or resinous substances; so also does spirits of turpentine, and generally without injury to colors. The turpentine may afterwards be removed with alcohol or whiskey. Common burning fluid, which is a mixture of alcohol and turpentine (or camphene,) is an excellent solvent of oil, wax, tar, resin, etc., and it soon dries off after use.——Ink stains, or iron mold, may generally be removed with the juice of lemons or of sorrel leaves. If these fail, oxalic acid is almost infallible. Moisten the stain spots with water, and rub on a little powdered oxalic acid which can be cheaply obtained at any druggist's. Wash off the acid very thoroughly, soon after it is put on, or it will eat the fabric. If children are present, remember that oxalic acid is poisonous in the mouth, though not so on the hands, if not kept long upon them.——Moistening a cloth, and holding it for a few minutes over the fumes of burning sulphur, will bleach out most colors and stains. Be careful not to burn the fabrics. The fumes may be conducted to any particular spot by a paper roller in funnel shape, (or a common tin funnel,) held over the sulphur burning upon a shovel. The sulphur fumes are specially applicable to stains of fruit, and of vegetable juices generally. These may frequently be removed by dipping the fabric in sour milk and drying it in the sun, repeating the operation several times if needed.—All oily substances (except the paint oils) can be expelled from carpets by holding a very hot iron as near as it can be placed without burning. Porous paper or common brown paper laid upon a grease spot, and run over several times with a hot sad-iron ("flat iron") will absorb the oil.

Greening Pickles with Grape Leaves.

It is usually considered very desirable by housekeepers that pickled cucumbers, mangoes, etc., should be of a deep green color. They taste no better, but they look nicer. It is well enough to improve the appearance of food provided it be not at the expense of healthfulness. In the usual method of "greening" pickles, the desired color is imparted by the presence of an active poison. Various cook-books give directions to place the pickles in a brass or copper vessel, pour hot alum water over them, and let them remain until of the desired color: that is until the salt of copper, verdigris, has acted upon them sufficiently. No, no, Messrs. cook-book makers, don't advise people to do any thing of the kind. Pickles in their best estate are sufficiently difficult of digestion, and the verdigris will not help the matter.

Mrs. Haskell, in her Housekeeper's Encyclopedia, gives the following process for greening pickles, which is entirely free from the above objections. We have not seen it tried, and although the method does not strike us favorably, it may answer the purpose—Mrs. Haskell ought to know; at any rate the experiment is easily made and will not injure the pickles: "When packing the cucumbers in salt, line the barrel, bottom and sides, with grape-leaves, and pack between the layers of cucumbers a quantity of the fresh leaves, until the barrel is full. When salted through, remove them from the brine, and pour boiling water upon the pickles, several times. If not the desired color, line a tub in the same manner that the barrel was prepared, and pack the pickles with a large quantity of the leaves. Heat vinegar boiling-hot, pour it over the pickles, and cover them tightly. If, the next morning, they are not sufficiently greened, drain off the vinegar, reheat it, and pour it again over them; repeat the process until of the color desired. When they are sufficiently greened, pour over them hot vinegar; if they taste of he vine leaves, change the vinegar after a week.

Cooking Eggs.

A correspondent of the *American Agriculturist* writes: "If eggs are boiled 3 to 3½ minutes, the yolks have a raw taste, and they are too *mussy*. A much better way is to put them into water just a little too hot to bear one's fingers in it, and set them where they will not get very hot; let them remain about fifteen minutes, when the yolks will be nicely cooked, and the whites will be very soft and nice, but not soft enough to have a disposition to get away. To tell when they are done, whirl one with the thumb and finger. A cooked egg will whirl like a top, but a half-done egg will stagger like a drunken man.

To fry eggs.—Grease a straight edged dish with a little butter; pour them into it, and set them into a moderately heated oven. Do not let them cook too much."

REMARK.—Our correspondent evidently has not learned to enjoy eggs rightly cooked. They should be "mussy," as she terms it. The proper and healthful mode of eating eggs is with a spoon, from an egg-glass, tumbler, or teacup, and they should never be cooked so hard that they can not be stirred with a spoon. Thus cooked, and spiced with a little salt, and pepper if this is used, they have a rich buttery taste, instead of the hard, dry, or mealy taste resulting from hard boiling, when they need butter to make them go down. It takes some time for one used to hard boiled, indigestible eggs, to learn to eat them soft boiled, but the latter are enough better to pay for the learning. We have long since tried the change, and on no account would go back to the old mode.

Corn Yeast.

Contributed to the *American Agriculturist*, by Mrs. L. Gilbert, Jones Co., Iowa: Brown a pint of corn as if for coffee; pare four middling sized potatoes; add a handful of hops, and boil the whole in two quarts of water two hours. Take out the corn; rub the potatoes through a colander, and then strain the liquid. Add 1 teacupful of salt, 2 of sugar, 1 of yeast, and warm water enough to make two gallons; let it stand lukewarm twenty four hours; then bottle, and cork tightly. One teacupful of this yeast will raise two large loaves of bread, and it will keep good for three months.

Root Beer.

Mrs. L. D. Kendall, sends the following recipe to the Country Gentleman: For 10 gallons of beer, take 3 pounds common burdock root, 1 pound dandelion root, ½ pound sassafras root, or 1 ounce essence sassafras, ½ pound good hops, 1 pint corn roasted dark brown. Boil the whole in 6 gallons pure water until the strength of the materials is obtained; then strain while hot into a keg, adding enough cold water to make 10 gallons. When nearly cold add clean molasses or syrup until palatable—not *sickishly* sweet. Add also as much fresh yeast as would raise a batch of 8 loaves of bread. Place the keg in a cellar, or other cool place, and in 48 hours you will have a keg of famous, healthy, sparkling root beer.

Tomato Pickles.

Contributed to the *American Agriculturist* by M. C. Monk, Norfolk Co., Mass.: Slice green tomatoes and put them in salt and water for three or four days. Scald them in alum water; then place a layer in the bottom of a jar and sprinkle on a little sugar, allspice, and cinnamon; put in another layer, sprinkle as before, and so on until the jar is nearly filled, and cover the whole with scalding cider vinegar.

CLOVE CAKE.—1 lb. flour; 1 lb. of sugar; 1 lb. raisins; ½ lb. of butter; wine glass of brandy(?); 1 teacupful of cream; a teaspoonful of cinnamon, 1 of cloves, 1 of nutmegs; 5 eggs, 1 teaspoonful of saleratus.

If you would rise as far as possible above the brute creation, cultivate your thinking, reasoning faculties, for it is thinking and reasoning that makes the difference, not only between man and brute, but also between man and man.

Sidney Smith says marriage resembles a pair of shears, so joined together that they can not be separated. They often move in opposite directions, yet always punish any one who comes between them.

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About the Picture.

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The mother sat by the window busily sewing white braid on a little buff sleeve of Willie's. "Well, my dear," she said, "I think you might gather the flower seeds this afternoon. It will be shady under the locust trees. Those sweet williams, and larkspurs, are all wasting, and so are the four-o'clocks, and the morning glories on the lattice."

"There is not much use in sowing the seed, mother, they will all come up just the same."

"That is true, but you might give the seed to some one who has none. Do you not know of some place where they have no flowers, and where they might be induced to cultivate them?"

"Yes, mother, I pass half a dozen places every day as I go to school, where the factory people live, and they have not a flower about, though all have a bit of door-yard."

"Just think how pleasant it would look, to see flowers blooming all along that row, and morning glories climbing about the windows. Then what a blessing it would be to the poor hard-working people. My little daughter does not appreciate the value of a refined, tasteful home, as she would after living for a time in one of these poor places."

"Oh, mother," said Lizzie, with a little shudder at the bare possibility of such a thing.

"Well, we should do what we can to make their life brighter and better. Flowers are God's little ministers, sent to bless and cheer alike the high and the lowly. I can not bear to see them wasted, when they might be cheering some lonely lot. I remember a lesson our gray-haired gardener taught me when a child. We had been taking up roses and lilacs, and there were many more than we wanted. Our neighbors were well supplied, so I proposed throwing them away. 'I think it would be wrong, Miss Clara, to waste these sweet gifts of God,' said Philip, 'I would rather plant them by the wayside, where they may surprise and please some weary-footed traveler.' So we concluded to set them out by the rustic seat near the bridge. They grew fast in the rich soil by the river, and I do not think the richest flower garden ever gave more delight. They were free to all, and foot travelers, and little children especially, enjoyed their fragrance. Good, old Philip, he was always trying to do some one a favor."

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Defendant.—She was such an enormous eater.

J.—But you agreed to board her for her work?

D.—Yes, your honor, but she eat so voraciously.

J.—How much would it cost to feed her? One dollar a week?

D.—Oh, that isn't a circumstance.

J.—Perhaps a dollar and a half, or two dollars?

D.—Nothing less than two dollars and a half, I assure your honor.

J.—(With a merry twinkle in his eye) Well then, I give judgment that you pay to the girl two dollars and a half per week for the remaining time she was engaged—which according to your own statement of the contract, is what she is entitled to.

Fig. 22.

Explanation of War Terms....No. III.

How to distinguish the Rank of any Officer in the Army, by his Dress or Equipments.

We thought enough had been said on this subject, but a large number of our readers write that the plain descriptions and illustrations we have given, are just what is needed by the mass of people, and the call is for more.——Perhaps nothing will interest our younger readers more, than to be told how to know the *rank* of different officers they meet with, by simply looking at their uniform.——The uniform, or dress of soldiers, is one of the most attractive features of the military equipment. To carry a gun, is a passion with most boys from infancy almost; but the sight of the long rows of men with coats and pants and caps all alike, and with their feathers, belts, and epaulets, has much to do with drawing men into an army: the tinsel, the glitter, and the bright colors catch and please the eye. But these decorations are useful as well as ornamental. An army is a machine to be hurled against an enemy, and to be effective, all its parts must be perfect. The officers are guide wheels, so to speak, and their uniform serves to distinguish them, and to mark their rank and authority.

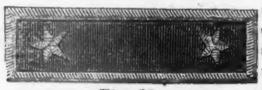

Fig. 23.

Fig. 24

Fig. 25.

The regular army, that is the soldiers kept in time of peace, is divided into different *corps* or classes—the Artillery, or soldiers using cannons; the Cavalry or mounted troops; and the Infantry or foot soldiers, armed with muskets or rifles, and bayonets. All the men in any one of these classes dress alike in the regular army.

Volunteers, that is those enlisted for the duration of any war, wear a variety of uniforms, each regiment being governed by fancy, or by the garments chancing to be supplied to them by the State which equips them. Some have light blue coats, and red pantaloons; others wear yellow and blue; others gray, and so on through every variety and combination. Gray clothing is doubtless the best for wear and for *safety*, as a man dressed in gray is not a very conspicuous object for an enemy to fire at. The *Officers*, however, both of the regulars and volunteers, all wear certain badges by which their rank can be known at a glance. These badges consist mainly of marks upon the *shoulders* or *sleeves*. The following explanation will show the *essential* marks.

Fig. 26. Fig. 27. Fig. 28.

Fig. 22, is a picture of the (acting) *Commander in Chief*. His rank is shown by the *three* silver stars on his epaulet, the middle star being the largest. The stars may be on a simple strap on the shoulder. No other officer wears three *silver* stars. The epaulet or strap is edged with silver lace.

Fig. 23 shows the distinguishing mark of a *Major General*, who is next in rank to the Commander in Chief. *Two* silver stars are worn on a simple strap on the shoulder, or on the epaulet, if that be worn.

Fig. 24, marks the *Brigadier General* who commands a brigade, consisting of two or more regiments. This officer wears *one* silver star on his shoulder, either on an epaulet, or on a cloth strap. The above marks belong to general officers of a large army. The next five belong to the general or staff officers of a *regiment;* and as regiments (of about 1000 men) are being raised all over the country, most persons will be able to see many of the officers wearing them.

In fig. 29 you have a *Colonel*, the highest officer of a regiment. His distinguishing mark is a *silver spread eagle* on each shoulder, either upon the epaulets, or on a cloth strap over each shoulder.

Fig. 25, marks the *Lieutenant Colonel*, who is next

Fig. 29.

in rank to the Colonel. He has a *silver leaf* upon each end of the shoulder strap or epaulet, that is, two silver leaves upon each shoulder. The *Major* of a Regiment wears similar leaves, but they are worked in *gold* lace instead of silver.—The above are commissioned officers. There are three non-commissioned officers of a Regiment who have no shoulder marks, but are distinguished by stripes or marks on the *sleeve* of the coat as follows: Fig. 26, the *Sergeant Major*, wears on the sleeve below the shoulder *three* bars or stripes of *silk*, running down to a point or angle, with three *curved* cross stripes above them.

Fig. 30.

Fig. 31.

Fig. 32.

Fig. 27, the *Quartermaster's Sergeant* wears similar bars of *silk*, but the cross bars at the top are *straight*, and not curved like those of the Sergeant Major.

Fig. 28, the *Ordnance Sergeant*, wears three angular stripes of *worsted*, and instead of the three cross-bars, he has a star worked in *worsted*.——We now come to officers of a Company, which consists of 100 men or less. You will remember that usually there are ten companies in a regiment, which are designated by letters of the alphabet from A to K, omitting J, thus: Company A, Company B, etc.

Fig. 30, shows the mark of a *Captain*, the highest officer of a Company. It is a shoulder piece of cloth, worked with a *gold* embroidered edge, and has *two* gold bars on each end. One of these straps is worn on each shoulder.

Fig. 31, marks the 1st *Lieutenant* of a company, who is next under the Captain. His shoulder straps are like those of the Captain, excepting that they have only *one golden* cross bar instead of two. Four regimental officers, viz., the *Surgeon*, *Quartermaster*, *Paymaster*, and *Commissary*, have the rank of Lieutenant, and each wears the strap with the gold cross bar at each end, and in addition, *gold embroidered letters* designating his department. The Surgeon's strap has the letters *M. S.*, which stand for Medical Staff. The strap of the Quartermaster is marked *Q. D.*, for Quartermaster's Department; the Paymaster's is marked *P. D.*, for Paymaster's Department, and the Commissary's, *C. D.*, meaning Commissary Department.

Fig. 33. Fig. 34. Fig. 35.

Fig. 32, marks the *2nd Lieutenant* of a Company. It is a simple strap like that of a captain, but has no cross bars. The Captain, and 1st and 2nd Lieutenants are "Commissioned Officers," and you will note that all officers holding commissions from the government have the distinguishing marks *upon the shoulders*, while the non-commissioned officers both of regiments and companies wear their distinguishing badges *upon the arm*.

Fig. 33, marks the *First Sergeant*, (or *Orderly Sergeant*) of a company. He wears on his arms *three* angular stripes of *worsted*, with a lozenge or diamond above them. (Note that in figures 26 and 27, the stripes are of silk).

Fig. 34, distinguishes the simple *Sergeants* of a company. There are usually five of these sergeants in a company, each one having charge of a platoon of about 20 men. The badge consists of *three* angular stripes of *worsted*, with no mark above.

Fig. 35, is the badge of a *Corporal*, the lowest officer of a company. This consists of *two* angular *worsted* stripes worn on the arm.

The officers and men of the different branches of service are further designated by making the straps of different colors: Thus the officers, attached to the *staff* of a general have *dark blue* shoulder straps; those of Artillery officers are *scarlet;* Infantry officers wear *light blue;* Riflemen, are distinguished by *green* badges, and Cavalry by *orange*.

Recapitulation.

Fig. 22—3 silver stars, *Commander in Chief*.
Fig. 23—2 silver stars, *Major General*.
Fig. 24—1 silver star, *Brigadier General*.
Fig. 29—silver spread eagle, *Colonel*.
Fig. 25—silver leaves, *Lieutenant Colonel*—Leaves in *gold*, mark the *Major*.
Fig. 26—silk bars and curved stripes, *Sergeant Major*.
Fig. 27—silk bars and straight cross stripes, *Quartermaster's Sergeant*.
Fig. 28—three angular *worsted* stripes, and star, *Ordnance Sergeant*.
Fig. 30—two gold bars on each end of strap, *Captain*.
Fig. 31—one gold bar, *First Lieutenant*.—One gold bar and letters, mark the *Surgeon*, *Quartermaster*, *Paymaster*, and *Commissary*.
Fig. 32—plain gold edged strap, *Second Lieutenant*.
Fig. 33—three angular worsted stripes and lozenge on arms, *Orderly Sergeant*.
Fig. 34—three angular plain worsted stripes, *Sergeant*.
Fig. 35—two angular plain worsted stripes, *Corporal*.

Problems.

No. 18—*Illustrated Rebus, suited to the Times.*

This problem was published last month, but as only one correct answer has been received, we

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J.—But you agreed to board her for her work?

D.—Yes, your honor, but she eat so voraciously.

J.—How much would it cost to feed her? One dollar a week?

D.—Oh, that isn't a circumstance.

J.—Perhaps a dollar and a half, or two dollars?

D.—Nothing less than two dollars and a half, I assure your honor.

J.—(With a merry twinkle in his eye) Well then, I give judgment that you pay to the girl two dollars and a half per week for the remaining time she was engaged—which according to your own statement of the contract, is what she is entitled to.

Fig. 22.

Explanation of War Terms....No. III.

How to distinguish the Rank of any Officer in the Army, by his Dress or Equipments.

We thought enough had been said on this subject, but a large number of our readers write that the plain descriptions and illustrations we have given, are just what is needed by the mass of people, and the call is for more.——Perhaps nothing will interest our younger readers more, than to be told how to know the *rank* of different officers they meet with, by simply looking at their uniform.——The uniform, or dress of soldiers, is one of the most attractive features of the military equipment. To carry a gun, is a passion with most boys from infancy almost; but the sight of the long rows of men with coats and pants and caps all alike, and with their feathers, belts, and epaulets, has much to do with drawing men into an army: the tinsel, the glitter, and the bright colors catch and please the eye. But these decorations are useful as well as ornamental. An army is a machine to be hurled against an enemy, and to be effective, all its parts must be perfect. The officers are guide wheels, so to speak, and their uniform serves to distinguish them, and to mark their rank and authority.

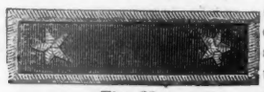

Fig. 23.

Fig. 24

Fig. 25.

The regular army, that is the soldiers kept in time of peace, is divided into different *corps* or classes—the Artillery, or soldiers using cannons; the Cavalry or mounted troops; and the Infantry or foot soldiers, armed with muskets or rifles, and bayonets. All the men in any one of these classes dress alike in the regular army.

Volunteers, that is those enlisted for the duration of any war, wear a variety of uniforms, each regiment being governed by fancy, or by the garments chancing to be supplied to them by the State which equips them. Some have light blue coats, and red pantaloons; others wear yellow and blue; others gray, and so on through every variety and combination. Gray clothing is doubtless the best for wear and for *safety*, as a man dressed in gray is not a very conspicuous object for an enemy to fire at. The *Officers*, however, both of the regulars and volunteers, all wear certain badges by which their rank can be known at a glance. These badges consist mainly of marks upon the *shoulders* or *sleeves*. The following explanation will show the *essential* marks.

Fig. 26. Fig. 27. Fig. 28.

Fig. 22, is a picture of the (acting) *Commander in Chief*. His rank is shown by the *three* silver stars on his epaulet, the middle star being the largest. The stars may be on a simple strap on the shoulder. No other officer wears three *silver* stars. The epaulet or strap is edged with silver lace.

Fig. 23 shows the distinguishing mark of a *Major General*, who is next in rank to the Commander in Chief. *Two* silver stars are worn on a simple strap on the shoulder, or on the epaulet, if that be worn.

Fig. 24, marks the *Brigadier General* who commands a brigade, consisting of two or more regiments. This officer wears *one* silver star on his shoulder, either on an epaulet, or on a cloth strap. The above marks belong to general officers of a large army. The next five belong to the general or staff officers of a *regiment;* and as regiments (of about 1000 men) are being raised all over the country, most persons will be able to see many of the officers wearing them.

In fig. 29 you have a *Colonel*, the highest officer of a regiment. His distinguishing mark is a *silver spread eagle* on each shoulder, either upon the epaulets, or on a cloth strap over each shoulder.

Fig. 25, marks the *Lieutenant Colonel*, who is next

Fig. 29.

in rank to the Colonel. He has a *silver leaf* upon each end of the shoulder strap or epaulet, that is, two silver leaves upon each shoulder. The *Major* of a Regiment wears similar leaves, but they are worked in *gold* lace instead of silver.—The above are commissioned officers. There are three non-commissioned officers of a Regiment who have no shoulder marks, but are distinguished by stripes or marks on the *sleeve* of the coat as follows: Fig. 26, the *Sergeant Major*, wears on the sleeve below the shoulder *three* bars or stripes of *silk*, running down to a point or angle, with three *curved* cross stripes above them.

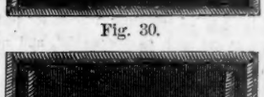

Fig. 30.

Fig. 31.

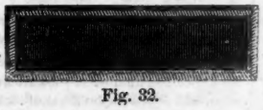

Fig. 32.

Fig. 27, the *Quartermaster's Sergeant* wears similar bars of *silk*, but the cross bars at the top are *straight*, and not curved like those of the Sergeant Major.

Fig. 28, the *Ordnance Sergeant*, wears three angular stripes of *worsted*, and instead of the three cross-bars, he has a star worked in *worsted*.——We now come to officers of a Company, which consists of 100 men or less. You will remember that usually there are ten companies in a regiment, which are designated by letters of the alphabet from A to K, omitting J, thus: Company A, Company B, etc.

Fig. 30, shows the mark of a *Captain*, the highest officer of a Company. It is a shoulder piece of cloth, worked with a *gold* embroidered edge, and has *two* gold bars on each end. One of these straps is worn on each shoulder.

Fig. 31, marks the 1st *Lieutenant* of a company, who is next under the Captain. His shoulder straps are like those of the Captain, excepting that they have only *one golden* cross bar instead of two. Four regimental officers, viz., the *Surgeon*, *Quartermaster*, *Paymaster*, and *Commissary*, have the rank of Lieutenant, and each wears the strap with the gold cross bar at each end, and in addition, *gold embroidered letters* designating his department. The Surgeon's strap has the letters *M. S.*, which stand for Medical Staff. The strap of the Quartermaster is marked *Q. D.*, for Quartermaster's Department; the Paymaster's is marked *P. D.*, for Paymaster's Department, and the Commissary's, *C. D.*, meaning Commissary Department.

Fig. 33. Fig. 34. Fig. 35.

Fig. 32, marks the *2nd Lieutenant* of a Company. It is a simple strap like that of a captain, but has no cross bars. The Captain, and 1st and 2nd Lieutenants are "Commissioned Officers," and you will note that all officers holding commissions from the government have the distinguishing marks *upon the shoulders*, while the non-commissioned officers both of regiments and companies wear their distinguishing badges *upon the arm*.

Fig. 33, marks the *First Sergeant*, (or *Orderly Sergeant*) of a company. He wears on his arms *three* angular stripes of *worsted*, with a lozenge or diamond above them. (Note that in figures 26 and 27, the stripes are of silk).

Fig. 34, distinguishes the simple *Sergeants* of a company. There are usually five of these sergeants in a company, each one having charge of a platoon of about 20 men. The badge consists of *three* angular stripes of *worsted*, with no mark above.

Fig. 35, is the badge of a *Corporal*, the lowest officer of a company. This consists of *two* angular *worsted* stripes worn on the arm.

The officers and men of the different branches of service are further designated by making the straps of different colors: Thus the officers, attached to the *staff* of a general have *dark blue* shoulder straps; those of Artillery officers are *scarlet;* Infantry officers wear *light blue;* Riflemen, are distinguished by *green* badges, and Cavalry by *orange*.

RECAPITULATION.

Fig. 22—3 silver stars, *Commander in Chief.*
Fig. 23—2 silver stars, *Major General.*
Fig. 24—1 silver star, *Brigadier General.*
Fig. 29—silver spread eagle, *Colonel.*
Fig. 25—silver leaves, *Lieutenant Colonel*—Leaves in *gold*, mark the *Major.*
Fig. 26—silk bars and curved stripes, *Sergeant Major.*
Fig. 27—silk bars and straight cross stripes, *Quartermaster's Sergeant.*
Fig. 28—three angular *worsted* stripes, and star, *Ordnance Sergeant.*
Fig. 30—two gold bars on each end of strap, *Captain.*
Fig. 31—one gold bar, *First Lieutenant.*—One gold bar and letters, mark the *Surgeon*, *Quartermaster*, *Paymaster*, and *Commissary.*
Fig. 32—plain gold edged strap, *Second Lieutenant.*
Fig. 33—three angular worsted stripes and lozenge on arms, *Orderly Sergeant.*
Fig. 34—three angular plain worsted stripes, *Sergeant.*
Fig. 35—two angular plain worsted stripes, *Corporal.*

Problems.

No. 18—*Illustrated Rebus, suited to the Times.*

This problem was published last month, but as only one correct answer has been received, we

repeat it this month that you may try again.

No. 21—Contributed to the *American Agriculturist* by John Stagg, who desires to know, *how* it is solved: A boy counted his marbles by twos, threes, fours, fives, and sixes, and had one left over each time; but when he counted them by sevens, he had none remaining. What is the least number he could have, which could be thus counted?

No. 22.—*Arithmetical Problem.*—Contributed to the *American Agriculturist*, by George Washington Woodward, Hawkesville, U. C.: A market woman bought a certain number of apples at the rate of two for a penny, and afterwards four times as many more at the rate of three for a penny, and thinking to sell them all to a friend at cost price, she sold five for two-pence, and found she had gained 21 pence. How many apples did she buy in all?

Answers to Problems in former Nos.

No. 15.—*Interest and Discount Question.* (See page 218, July No.) Answer $3597,59.

No. 19.—*Military Letter in Cypher.* (See page 249, Aug. No.) The key to the translation is as follows: The first letter of each word is replaced by another found five letters distant from it in the alphabet; the second letter is replaced by one six letters distant from it, and so on alternately through the word. *Answer:* We expect to occupy Richmond in three days at furthest.

No. 20.—*Scriptural Enigma.* (See page 249, Aug. No.) *Answer:* A soft answer turneth away wrath. Scripture names: Ahaziah, Samuel, Othniel, Felix, Troas, Aaron, Nadab, Sodom, Wagons, Ehud, Ruth, Ten, Uzzah, Rhoda, Nebuchadnezzar, Esau, Thomas, Huldah, Anna, Wrath, Aquila, Yoke, Wilderness, Rebecca, Absalom, Timothy, Heth.

Correct answers received, and not previously acknowledged, from;

Frank Cook, No. 19; F. Porter Dalrymple, 19, 20; Wilford Wilson, 20; Carrie J. Griffen, 20; Abraham Marshall, 15; "Black Eyes," 20; J. Middleton, 20; J. Albert Evans, 20; A. T. Secor, 20; Albert Y. Brown, 18; W. Boyers, 20; C. L. Siewers and A. C. Siewers, 18; W. W. Walther, 20; Wm. Burton, 15, 18, 20; E. M. Stevenson, 20.

How the Angels do it.

Here is something for a certain class of children—perhaps for *you*. A teacher, in talking to her class about the part of the Lord's Prayer, "Thy will be done," said: "You have told me my dears what is to be done on earth, and how it is to be done, viz.: as it is done in heaven. Now, *how* do you think the angels do the will of God?"—The first child replied: "*They do it immediately.*" The second said, "*They do it diligently.*" The third said, "*They do it always.*" The fourth answered, "*They do it altogether.*" Here a pause ensued, until a little girl, raising her hand, answered: "Why, sir, *they do it without asking any questions.*"

The "Silver Rule"—Paste it Up.

You all know the golden rule, "Do unto others as you would wish them to do to you." Here is a rule which is almost a part of the golden rule, but which we will put by itself, and because of its value, call it the "Silver Rule"—*Think and say all you can of the good qualities of others; forget and keep silent concerning their bad qualities.*—You can not conceive how much such a course will lighten your own happiness, and raise you in the esteem of your mates. Did you ever think any more of a boy or girl because he or she found fault with others? Never call your schoolmates or playmates ugly, or cross, neither to their faces nor behind their backs. If they are ugly, or stingy, or cross, it does not make *them* better to talk or think about it, while it makes *you* love to dwell upon faults of others, and causes your own soul to grow smaller, and you become like the foul bird that prefers carrion for food. Rather tell all the good you can, and try to think of some good quality.

During the recent shock of an earthquake at Swanton, Vt., a little girl in the upper story of a house came running down stairs, saying she was afraid to stay up there, as "somebody rocked her chair when she didn't want to."

GOOD BYE, OLD FRIEND!—One of the Sixty-ninth Regiment, who lately arrived in New-York from the seat of war, describes the condition of the wounded in the "mistake" near Bull Run. There were several badly wounded, but one in particular had to have his right arm amputated. He bore the operation with much fortitude, and seeing the arm about to be taken away for burial, called the man back, and grasping the fingers, shook hands with the arm, saying, "Good bye, old friend; you served me often at a pinch, and I thought to carry you to the grave, but you are going before me. Good bye."

Liars.—A quaint old minister, after reading his text: "I said in my haste, all men are liars," began his sermon very thoughtfully: "Aye, David, ye said it in your haste, did ye? If ye had lived in *these* days and in this parish, ye might have said it at your leisure."

In an advertisement of some uncalled for baggage, by an English R. R. Company, an "l" dropped out from *lawful*, making it read: "People to whom these packages are directed, will please come forward and pay the awful charges on the same."

A scolding person can not govern others. What makes people scold? Because they can not govern themselves. How, then, can they govern others? Those who govern well, are generally calm; they are prompt and resolute, but steady and mild.

Tall Boys.—An "exchange" says: "a 'Board of Education' in Wisconsin has resolved to erect a building large enough to accommodate 500 students three stories high."

NEW PREMIUM LIST,

For 1862---Vol. XXI.

Or Pay to Voluntary Agents who will attend to collecting names of new and old subscribers, and forwarding them to the Office.

Experience has proved that it is a benefit to the subscribers themselves, as well as to the publisher, to have an *Agent* at every Post Office, to attend to collecting the names and subscriptions of old subscribers, and to present the advantages of the paper to those not yet acquainted with it. But to employ and commission a Special Agent in every neighborhood throughout the country, is out of the question. We therefore offer certain good articles, the value proportioned to the number of names sent in, and leave them open to every person disposed to attend to the business, in the locality where he may be known to be a reliable man. The *pay* offered for a year to come is very large, but perhaps none too much so for the times. By giving the articles offered we can make the pay *much larger* than if in money, because we have facilities for getting these articles at a low rate. Besides, the advertising thus given to the manufacturers, induces them to bear a considerable portion of the expense on the articles we need for premiums.

☞In selecting articles for premiums, we have aimed to get such as are *useful*, and as have been most frequently called for by our readers. ☞WE WISH IT DISTINCTLY UNDERSTOOD *that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made, or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.*

☞We offer nothing *for competition.* Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he or she is working for; and also that if a higher premium is not secured, a lower one can be taken.

☞Any extra specimen copies, or show bills, needed by canvassers, will be freely furnished.

☞Only one premium can be paid on the same subscriber.

☞*We make no distinction between new and old subscribers*, but it is expected that every canvasser will not only gather up the names of old subscribers, but also secure a large number of new names.

☞The offer of *extra* numbers to new subscribers received now, makes it practicable for canvassers to begin collecting names at once. Indeed, these numbers are an extra inducement.

☞Every person collecting names for premiums, should send the names with the money as fast as obtained, so that the subscribers may begin to receive their papers; but if designed for premiums, two copies of each list of names should be sent—one of them marked at the top "For Premiums," and also with the name of the sender.

☞The premiums are offered for subscribers for Volume XXI (1862), *whenever received.* Canvassers will have time for completing their lists, but the premium will be paid as soon as any club is made up—if duplicate lists are sent.

☞Any person who has commenced sending in names at 80c, and finally fails to get the higher number of names, can fall back upon the smaller number, by remitting the 20 cents extra on each of the smaller number of names required.

☞Clubs need not be confined to one Post Office.

☞No premium is sent till *specifically asked for*, as we have many friends who send in large lists but will take no premium, and we are not certain that premiums are desired, unless the fact be mentioned particularly.

☞It is believed that all can recommend this journal to their friends and neighbors, and urge them to take and read it. It will continue to be *independent, out-spoken*, and *reliable*, the special friend, advocate, and promoter of the farmer's interests, and will aim to facilitate and lighten the labors of every household. A larger number of instructive as well as pleasing engravings, and a greater amount of really useful information, will be given in the next Volume, than in any preceding one. *Onward, upward*, is our motto.

Table of Premiums for 1862.

Names of Premium Articles.	Price of Premiums.	Names at $1 each.	Names at 80 cts. each
1—Clothes Wringer, No. 1	$5 00	13	25
2—Clothes Wringer, No. 2	$7 50	18	37
3—Clothes Wringer, No. 3	$10 00	23	48
4—Sewing Machine, (Wheeler & Wilson)	$45 00	90	130
5—Sewing Machine, (Wilcox & Gibbs)	$35 00	69	98
6—Aneroid Barometer	$7 50	19	44
7—Hydropult	$12 00	30	48
8—Five Octave Melodeon (best)	$75 00	125	237
9—4½ Octave Melodeon (best)	$60 00	104	182
10—Four Octave Melodeon (best)	$45 00	90	130
11—New Cyclopedia, 16 volumes	$48 00	96	140
12—Worcester's *Unabridged* Dictionary	$7 50	17	40
13—Five back Volumes Agriculturist, *p.p.*	$5 60	16	30
14—Four do do do do	$4 48	13	26
15—Three do do do do	$3 36	19	20
16—Two do do do do	$2 24		15
17—One do do do do	$1 12		10
18—Windsor & Newton's Paints	$2 50		20
19—Osborn & Hodgkinson's Paints	$1 50		15
20—Hand Corn Sheller (best)	$6 50	21	40
21—Straw and Hay Cutter (best)	$8 00	24	48
22—Best Subsoil Plow (2-horse)	$8 00	24	48
23—Various Books—*See terms below*			

DESCRIPTION OF THE PREMIUMS.

Premiums. 1, 2, 3.—Wringing Machine.

We place this first, for it is nearly new, and one of the most useful articles for every family. We had one of the first made, and have used it over a year with the highest satisfaction. It completely does away with the hard straining work required to wring out garments by hand. It does not twist and break the fibres of the clothes, but simply presses them between two elastic India-rubber rollers, which are moved by a crank, and whether large or small pieces, they come out drier than when wrung by hand. The saving to garments would soon pay the cost of the implement, to say nothing of the saving of woman's labor. The machine is set upon the side of any tub; the garments drop out into a basket. A child can quickly wring out a tub full of clothes—They are of three sizes.—No. **2**, costing $7 50, is just the thing for common family use. This we present to any one sending us **18** subscribers for the *Agriculturist*, at $1 each, (or **37** at the lowest club price of 80 cents.)——No. **1**, costing $5, will answer very well when No. 2 can not be afforded, but No. 2 is preferable. We will present No. **1** to any one sending **13** subscribers at $1 each, (or **25** at 80 cents.)——No. **3**, costing $10, is adapted to larger families and Hotels. We will present it for **23** subscribers at $1 each, (or **48** at 80 cts. each.) ——We are glad to be able to present this implement as a premium on such liberal terms. One or more clubs for a No. 2 might be made up in almost every neighborhood.

Premium No. 4—Sewing Machine.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person sending them to *Wheeler & Wilson's* best **$45 Sewing Machine,** (including **Hemmer**), new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by nearly *four* years' use in our own family, in connection with other machines. We want no better.—The prolongation of life, the saving of health and strength to our females, and the better physical vigor thus secured to the next generation, render the Sewing Machine one of the most desirable additions to the household.——The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using go with each machine.

Premium No. 5—Sewing Machine.

69 Subscribers at $1 each, (or **98** at 80 cents each,) will entitle the person procuring them to *Wilcox & Gibbs'* **$35 Sewing Machines,** including a set of **Hemmers.** This is the best machine of its kind, (sewing with two thread,) and has several points superior to other machines. It is neat, well made, simple in its operation; and having tested one in our own family for more than a year, we think highly of it, and can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is $30, but we have included in our offer $5 extra for the set of *Hemmers*, because those used with this machine are very simple and effective, and should go with every machine sent out.) The machines given as premiums, will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium No. 6—Barometer.

19 Subscribers at $1 each, (or **44** at 80 cents each,) will entitle the person getting up the club to one of *Kendall's* **Aneroid Barometers,** (Price $7 50.) This is a good portable instrument, and valuable to every person as a

weather guide, as well as for scientific purposes. We have had one in use for nearly two years, and find it not only accurate, but an admirable weather prophet. Scarcely a rain storm or gale of wind has occurred, that has not been heralded by our barometer. Each instrument is packed in a neat leather case, 6 inches square, and 4 inches deep, and this, surrounded by cotton, is enclosed in a wooden box, ready to be carried anywhere by express or otherwise.

Premium No. 7—Hydropult.

30 Subscribers at $1 each, (or **48** at 80 cts. each,) will entitle the person making up the club to the **Hydropult,** (Price $12,) a very useful hand implement for carrying instantly to any desired point, to throw water from a pail, tub, cistern, or other receptacle, for extinguishing fires, watering plants, washing carriages, etc., etc. A stream can be thrown up to the third story windows. It is supplied with jet pipe and rose or sprinkler; is made of brass, and is durable. It weighs only 8 lbs., and can be packed in small compass to go by express or otherwise.

Premium No. 8—Melodeon.

125 Subscribers at $1 each, (or **237** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$75 Melodeons** (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly, by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

☞ The above premium list may be made up by the members of a congregation, or Sabbath School, and an instrument thus secured for a church or school-room. This was done in several instances the past year.

Premium No. 9—Melodeon.

104 Subscribers at $1 each, (or **182** at 80 cents each) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$60 Melodeons** (4½ octaves.) See remarks above.

Premium No. 10—Melodeon.

90 Subscribers at $1 each, (or **130** at 80 cents each,) will entitle the person getting up the club to one of *Geo. A. Prince & Co.'s* **$45 Melodeons** (4 octaves.) See remarks above. **N. B.**—Higher priced Melodeons will be given for larger lists, in the same proportion.

Premium No. 11—New Cyclopedia.

96 Subscribers at $1 each, (or **140** at 80 cents each,) will entitle the person getting up the club to a set of *Appleton's* **New American Cyclopedia,** now in course of publication, consisting of *sixteen large volumes* of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Twelve volumes are now ready, and the remaining four will be furnished as fast as issued. The original design of this work was 15 volumes, but it is found that the immense mass of matter will require 16 large volumes. The work is sold at $3 per volume, or $48 for the set. To no better purpose could any one devote the coming Fall and Winter evenings than to raising the club of subscribers required to secure this most valuable work for himself and family.

Premium No. 12—Best Dictionary.

18 Subscribers at $1 each, (or **40** at 80 cts. each,) will entitle the person getting up the club to a copy of the *large Pictorial Unabridged Edition of* **Worcester's Dictionary,** (Price $7 50.) This now stands confessedly the most valuable Standard Dictionary published. It weighs nearly **10** lbs.; is **12** inches long, **10** inches wide, nearly **4** inches thick, and contains **1854 pages** of 3 columns each, giving the spelling and pronunciation, with full explanations, of every word in the English Language, and as a source of general information on all subjects, stands next to the Cyclopedia. The Dictionary can be called for at our Office, or be sent by Express or otherwise, to any part of the country. The *United States Express Company* have kindly agreed to deliver the book at very moderate rates to any part of the country where their lines extend. It can also go by mail to any place within 3,000 miles for $1 60, prepaid postage. Except to remote points, the expense will be *much less* by Express. (Persons living off from express lines, can usually have it delivered to some person on the line, and send for it at their convenience.)

Premiums Nos. 13 to 17—Back Volumes.

These premiums (13 to 17,) will enable any one to secure the previous excellent volumes of the *American Agriculturist*, as far back as Volume XVI. We have stereotype plates and can print any number desired of the English Volumes 16, 17, 18, 19, and 20, and of the German Volumes 18, 19, and 20. These will be sent in clean, new numbers, each volume by itself, with index complete, and be forwarded *postpaid.* The whole five can be taken together, or one or more copies of any particular volume be selected, as desired. They will be presented as in the table above, viz: For **16** Subscribers at $1 each, (or **30** at 80 cents each,) we will present **five volumes.**—For **13** Subscribers at $1 each, or **26** at 80 cents each, **four volumes.**—For **10** Subscribers at $1 each, (or **20** at 80 cents each,) **three volumes.**—For **15** Subscribers at 80 cents each, **two volumes.**—For **10** Subscribers at 80 cents each, **one volume.**—Let every one selecting these premiums be careful to name just *which* back volumes are desired.

Premium No. 18—Paints.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of *Windsor & Newton's* **Water Color Paints**—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where within 3000 miles. (If to go to the British Provinces or to the Pacific Coast, the recipient will need to send 84 cents for extra postage above the 6 cents per ounce which we pay.)

Premium No. 19—Paints.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of *Osborne & Hodgkinson's* **Water Color Paints,** consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, $1,05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium No. 20—Corn Sheller.

21 Subscribers at $1 each, (or **40** at 80 cents each,) will entitle the person getting up the club to one of the best **$6½ Hand Corn Shellers.** (Price $6 50.) This is a convenient, useful implement, very frequently called for. We give the best implement to be obtained for the price.

Premium No. 21—Hay Cutter.

24 Subscribers at $1 each, (or **48** at 80 cents each,) will entitle the person getting up the club to one of the best **$8 Straw and Hay Cutters.** This is a useful implement, needed wherever horses and cows are kept.

Premium No. 22—Subsoil Plow.

34 Subscribers at $1 each, (or **48** at 80 cents each,) will entitle the person getting up the club to the best **$8 Subsoil Plow** (two-horse), a very effective and desirable implement.

Premium No. 23—Good Books.

Here is an opportunity to get a good library at little expense. Any person getting up a club of **16** or more names, may choose any desired Books from the list advertised on page 286, *to the amount of 12½ cents for each name forwarded at 80 cents,* (or 83¼ cents for each name sent at $1,) and the books will be *delivered to the recipient free of all expense for postage.* ☞ Persons making up a club for any of the preceding premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Business Notices.

☞ *Eighty Cents a Line of space.*

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Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, August 19, 1861.

The following tables show at a glance the aggregate amount of business transacted in the New-York Markets, for a month previous to this date, and also a comparison with the previous month. (These tables and the information given in this review, are furnished by our experienced reporter who spends his entire time in the markets; and the information here given may be relied upon as being as correct as any that can be obtained.)

TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*	*Oats.*
26 days *this* month	325,000	1,784,000	2,434,000	136,247	114,700	449,000
26 days *last* month	472,000	3,105,000	1,132,000	188,000	54,100	477,000

SALES.	*Flour.*	*Wheat.*	*Corn.*	*Rye.*	*Barley.*
26 days *this* month	460,000	3,528,000	3,561,000	168,500	None.
26 days *last* month	399,000	4,475,000	1,864,000	156,500	None.

The receipts of Flour, Wheat, Rye, and Oats, though large for the month, would have been in much greater magnitude, but for a break in the Erie Canal. The arrivals of Corn have been heavy, as have also been those of Barley, which latter article has been neglected by purchasers. The sales of the month show a large increase in the business in Flour, Corn, and Rye, with less activity in Wheat, the supplies of which have been inadequate to the wants of buyers. It is extremely gratifying to us to be able to report a very marked rise in prices of Breadstuffs. The current rates to-day show an advance of 25 @65 cts. on flour, per barrel; 10@18 cts. per bushel on Wheat; 2@4 cts. on Corn; 3@4 cts. on Oats, and 4 cts. on Western Rye, over the prevailing prices on the 19th of July, to which date our last report was brought up. This encouraging improvement in the market has resulted mainly from the filling of large foreign orders. The amount of wheat and flour sent abroad from the port of New-York alone, since the beginning of this year, has been equivalent to over *twenty million bushels of wheat!* The export demand for the month has been very brisk, and has been chiefly for the British Islands and for France.

The harvest news from both countries has indicated a deficiency in the yield of the crops, even more serious than had been anticipated, and to procure adequate supplies for the ensuing year, our markets have to be resorted to. Fortunately our crops have been so good generally, that we can undersell all other countries, and this fact enables us, in a great measure, to control the markets for our produce. Foreign orders are coming here constantly, and the latest accounts from England promise a continuance of the present demand, if not a decided increase in it. Our latest news is by the Persia, which arrived on Thursday last. During the early part of the week in which she left Liverpool, the weather in England was reported as highly favorable, but on the day previous to her departure, it became quite unsettled, and serious fears were expressed for the safety of the harvest. A good demand prevailed in Liverpool and London, for Wheat wanted in France, and large sales of American could have been effected, if there had been sufficient shiproom available. In the New-York market, during the past week, the purchases on English and French account, particularly the latter, have been quite heavy, and have strengthened the confidence of holders materially. On Saturday, there was very little disposition to press sales, and the market was firm and buoyant. There is now a scarcity of shipping brands of Flour, and of desirable lots of Wheat and Corn; but as the break in the canal is reported as having been repaired, and navigation fully resumed, we may expect an immediate increase in the arrivals, that shall place us once more on a satisfactory footing in regard to supplies, which are really much wanted. Had there been enough Wheat or Corn, fit to ship in market, the past few days, a decidedly heavier business could have been transacted.... Our quotations for Cotton show an advance of 2¼ cts. ℔ lb., since the 19th of July, resulting from the prevalence of an active demand, chiefly on speculation, while the available supply has been very small indeed!... Rice has likewise risen $1 ℔ 100 lbs., and been freely purchased by speculators... Wool has been more inquired for, and has improved slightly. The demand for manufacturing army cloth is likely to keep the price of wool well up.... Tobacco has been in good request at very full rates.... The transactions in Hay, Hops, and Provisions, have been moderate, closing tamely at our quotations below.... Naval stores have rapidly advanced, and Groceries have also improved in prices.... The changes in other branches of trade have not been very important. The table of current prices below, shows the changes in prices at a glance.

CURRENT WHOLESALE PRICES.

	July 19.	Aug. 19.
FLOUR—Super to Extra State	$3 90 @ 4 50	$4 45 @ 4 90
Superfine Western	3 85 @ 4 00	4 45 @ 4 55
Extra Western	4 15 @ 6 75	4 60 @ 7 00
Fancy to Extra Genesee	4 55 @ 6 75	5 00 @ 7 00
Super. to Extra Southern	5 10 @ 8 75	5 20 @ 9 00
RYE FLOUR—Fine and Super.	2 50 @ 3 50	2 25 @ 3 50
CORN MEAL	2 75 @ 3 07½	2 70 @ 3 20
WHEAT—Canada White	1 18 @ 1 25	1 30 @ 1 35
Western White	1 15 @ 1 30	1 30 @ 1 40
Southern White	1 20 @ 1 35	1 35 @ 1 40
All kinds of Red	78 @ 1 12	90 @ 1 30
CORN—Yellow	48 @ 50	51 @ 53
White	48 @ 52	52 @
Mixed	39 @ 45	43 @ 50
OATS—Western	28 @ 31	32½@ 33½
State	32 @ 33½	33 @ 34
RYE	46 @ 67	59 @ 65
BARLEY	Nominal.	Nominal.
HAY, in bales, per 100 lbs	45 @ 70	40 @ 65
COTTON—Middlings, per lb	15¾@ 16	18 @ 18¼
RICE, per 100 lbs	5 00 @ 6 00	6 00 @ 7 00
HOPS, crop of 1860, per lb	16 @ 36	18 @ 27
FEATHERS, Live Geese, p. lb	32 @ 38	30 @ 38
SEED—Clover, per lb	None selling.	Nominal.
Timothy, per bushel	None selling.	do.
SUGAR—Brown, per lb	5 @ 7½	5¾@ 8
MOLASSES, New-Orleans, p. gl.	35 @ 40	40 @
COFFEE, Rio, per lb	11¼@ 14¾	12¾@ 15
TOBACCO—Kentucky, &c, p. lb	4½@ 16	5 @ 17
Seed Leaf, per lb	4 @ 26	5 @ 26
WOOL—Domestic fleece, p. lb	25 @ 45	25 @ 46
Domestic, pulled, per lb	18 @ 35	20 @ 37
TALLOW, per lb	8¼@	8 @ 8½
OIL CAKE, per ton	Nominal.	29 00 @35 50
PORK—New Mess, per bbl	15 50 @15 62½	@15 00
Prime, new, per bbl	10 00 @	10 00 @
BEEF—Repacked mess	8 25 @10 25	9 25 @11 25
LARD, in bbls., per lb	8 @ 9	8 @ 9¼
BUTTER—Western, per lb	6 @ 12	7 @ 11
State, per lb	8 @ 14	8 @ 14
CHEESE	3 @ 7	4 @ 7¾
EGGS—Fresh, per dozen	13 @ 14	10 @ 12
POULTRY—Fowls, per lb	12 @ 14	10 @ 11
Chickens, Spring, per pair	62 @ 75	31 @ 50
Turkeys, per lb	12 @ 14	9 @ 10
Wild Pigeons, per doz	1 00 @ 1 25	88 @ 1 00
Dried Apples, per lb	2¼@ 4½	4 @ 4½
Dried Peaches, per lb., peeled	10 @ 12	10 @ 12
Dried Cherries, pitted, per lb	10 @ 12	10 @ 11
Dried Raspberries, per lb	10 @ 12	10 @ 11
POTATOES—Mercers, p. bbl	2 37 @ 2 50	1 75 @ 2 50
June, new, ℔ bbl	2 00 @ 2 12	1 50 @ 1 65
GREEN CORN, per 100		75 @ 87
ONIONS—Red, per bbl		1 00 @ 1 25
TURNIPS—Rutabaga, per bbl		1 25 @ 1 75
SQUASH—Marrow, per bbl		1 00 @
WATERMELONS, per 100		20 00 @35 00
NUTMEG MUSKMELONS, ℔ bbl		2 00 @ 4 00
TOMATOES, per bushel		31 @ 62
PEARS—Bell, per bbl		4 00 @ 5 00
APPLES—Common, per bbl		1 50 @ 2 00
Apples—good, per bbl		3 00 @ 4 00
PEACHES, per basket		1 50 @ 2 50
HUCKLEBERRIES, per bushel	4 50 @	2 50 @ 3 00

Exports of Breadstuffs from New-York, from the 1st of January, to the second week in August, 1861:

	1860.	1861.
Wheat Flour, bbls	784,286	1,528,558
Rye Flour, bbls	5,197	6,557
Corn Meal, bbls	56,550	66,350
Wheat, bushels	3,147,279	12,454,062
Corn, bushels	1,680,631	5,012,097
Rye, bushels	6,000	283,832
Barley, bushels	8,280	1,000
Oats, bushels	99,900	142,464

Receipts of Breadstuffs at Detroit.

Receipts.	Past week.	Same week last year.	Since To same date Jan. 1, '61.	last year
Flour, bbls	6,066	12,025	464,596	195,510
Wheat, bushels	18,501	41,088	559,310	362,862
Corn, bushels	25,500	17,522	488,020	357,856
Oats, bushels	1,115	2,157	89,637	45,077
Rye, bushels	127	——	9,038	10,966
Barley, bushels	103	236	15,793	22,232

Receipts of Breadstuffs at Chicago, Jan. 1 to Aug. 14.

	1861.	1860.	1859.
Flour, bbls	730,648	225,016	238,053
Wheat, bushels	6,753,020	3,191,276	1,692,752
Corn, bushels	14,223,838	11,794,391	3,290,464
Oats, bushels	800,694	754,382	434,096
Rye, bushels	254,227	97,623	42,416
Barley, bushels	332,326	205,723	127,410

The receipts at tide-water at Albany, of the principal kinds of Breadstuffs from the opening of the Canals to and including the 14th of August, have been as follows:

	1861.	1860.	1859.
Canal open	May 1.	April 25.	April 15.
Flour, bbls	523,852	372,980	209,796
Wheat, bushels	11,811,333	4,480,923	696,003
Corn, bushels	8,000,289	7,642,394	1,392,881
Barley, bushels	187,420	75,913	147,191
Oats, bushels	2,595,028	3,547,727	2,347,931
Rye, bushels	387,984	121,967	99,146

N. Y. Live Stock Markets.—THE CATTLE MARKETS have been fully supplied with beeves during a month past, averaging 4,133 per week. With a short supply, July 24, prices advanced ½c. per lb, but receipts of over 5,000 the next week carried them back, and there has been no important change since. August 13, prices ranged: for prime cattle, 8c.@8½c.; medium, 7c.@7½c.; poor 5½c.@6½c.; with a general average of 7¼c. per lb., estimated dressed weight for all sold. A few hundred were left unsold at each market for the past three weeks.

VEAL CALVES.—Receipts have averaged only 595 per week, for a month past. This is sufficient for Summer demand: prices have advanced ½c. per lb. live weight since our last report, when the market was overstocked. They now sell at about 4½c.a5c. per lb. for medium to best.

SHEEP AND LAMBS.—These have come in more freely, the weekly average for a month past being 12,353. The receipts were over 15,000 for one week. Prices are lower; ordinary sheep selling at prices equivalent to 2½c.@3c. per lb. live weight; good stock 3¼c.; and extra large fat sheep 3½c.@4c. Lambs are quite plenty, selling slowly at 4½c.@5½c. per lb. live weight. Most of the lots of sheep and lambs now coming in average $2,75@$3 each.

LIVE HOGS.—Receipts are lighter, numbering but 4,694 per week for a month past, all of which have readily been disposed of. Prices are 1c. per lb. higher than the very low rates last reported, being 4½c @5c. per lb. live weight for corn fed, and 3¼c.a4c. for still fed hogs.

The Weather.—At the date of our last report, the ground was becoming dry in this vicinity, and with the exception of brief showers July 20, August 1 and 8, the drouth continued up to August 12. Crops suffered badly, as they were parched for six successive weeks. In many parts of the country copious showers fell, but not hereabouts. On the 12th and 13th of August we had a very heavy fall of rain (over 4 inches) with continued cool weather afterwards, and crops have revived again, though many fields of potatoes, and some of corn were past recovery.——OUR DAILY WEATHER NOTES, condensed, read: *July* 20, thunder shower A. M., clear P. M.—21 to 29, mostly clear and hot, crops suffering for rain—30, clear, light shower at night—31, clear and hot.——*August* 1, 2, 3, clear and hot—4, clear A. M., fine shower P. M., but not enough—5, 6, 7, clear and hot—8, cloudy, heavy rain, at night—9, cloudy, with a light rain and shower at night—10, 11, clear, warm—12, cloudy A. M., rain P. M., with heavy showers at night—13, soaking rain wetting the ground thoroughly and raising springs, being the greatest rain for several years—14, to 16, clear cool—17, light rain A. M., clear P. M.—18, clear, warm—19, clear, mild—20, clear, fine.——From July 15 to August 15, 5.22 inches of rain fell, viz.: .22 July 20, .27 the 31st, .71 August 8, 9, and 4.02 the 12th and 13th.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit.)—*r* indicates rain—*s*, snow.]

JULY.

1	64r	8	71	15	60	22	66	29	71r
2	60r	9	74r	16	65r	23	63	30	69
3	58	10	72r	17	62	24	62	31	71
4	63	11	68	18	68	25	63		—
5	66r	12	63	19	66	26	65	Av'g.	66
6	64	13	62r	20	68r	27	65		
7	68	14	64r	21	63	28	67		

AUGUST.

1	72	4	72	7	69	10	68	13	59r
2	72	5	74r	8	66r	11	69	14	55
3	72	6	72	9	62r	12	68r	15	58

A man's character is frequently treated like a grate—blackened all over at first to come out the brighter after undergoing hard rubbing.

Sundry Reports on the State of the Crops.

The following are a portion of the reports we have gleaned from the correspondence of the *American Agriculturist*. They will be found interesting, and, taken as a whole, will give a very fair idea of the general condition of the crops throughout the country.

Bennington Co., Vt., Aug. 7. E. Cranston.—Wheat, late sowed injured somewhat by insects (Aphides).... Oats, below an average crop, injured by insects, and by rust....Corn is poor, much replanted in Spring, and the season unfavorable; it was also injured by worms....Rye is well headed, but thin....Potatoes bid fair for a good crop....Grass was heavy; the best crop since 1855.

Litchfield Co., Conn., August 2. Augustus H. Fenn.—Corn, more than average breadth planted, forward and promises well for a large crop....Potatoes, large breadth, looking well, rather late in a good many localities...Rye, average space sown—fine crop—mostly got in a good condition....Hay unusually large crop—considerable damaged by getting wet....Oats, large breadth sown, almost worthless, destroyed by lice, very unusual here....Buckwheat not much sown, looks finely. Fruit, very poor, few apples, pears or peaches; was not, I believe, one cherry in the county....Berries, wild or cultivated, unusually prolific. Help, good, cheap and plenty. Farmers prospering well, and just now looked up to by all others.

Bristol Co., Mass., Aug. 10. Charles Bryant.—Wheat raised until three years since. Spring variety sown, yield good; shall have seventy per cent of supply for home consumption.....Corn 30 per cent more ground planted than usual, and never looked better.....Potatoes small, but of good quality, with increased breadth of ground planted.....Hay full up to average, and (thanks to the *Agriculturist* for hay caps) was never better cured.

Saratoga Co., N. Y., Aug. 9. Abraham Marshall.—Wheat, Winter variety little sown; Spring, less than usual, both injured by a new insect....Oats, less sown than usual on account of wet Spring; on dry grounds fair growth, other lands very poor, very late, badly struck with the rust, and all injured with a non-descript insect, which feeds on the sap of the fiber leading to the kernel. (*Aphis avenæ*, see another page).....Corn; fair amount planted; stalk middling but very late; without hot weather and late frosts but little can be expected.....Potatoes, less planted than last year, tops very fine....Grass abundant.....Fruit nearly a total failure, neither pears, cherries, nor plums....Berries abundant.

Somerset Co., Pa., July 22. W. H. Platt. Farmers are busy cutting their grain, the yield of which, both in quantity and quality, has never been surpassed.

Lycoming, Columbia and Montour Co.'s, Pa., July 29. Daniel Steck.—Wheat about the same area sown as last year; uninjured by insects, and housed in good order—the yield will be the best we have had in ten years, say from fifteen to thirty bushels per acre: so far as already threshed I have not heard of less than twenty five bushels per acre....Oats, a large area sown, the yield will be light in consequence of the ravages of an insect (*Aphis Avenæ*)....Hay crop about an average, secured in good order...Corn about the usual amount planted, say from fifteen to twenty five acres for every one hundred under cultivation; not as forward as same time last year but with a favorable season from this out, it will make an average crop....Buckwheat, extensively sown....Fruit, none except apples which will yield but a light crop.

Delaware Co., Pa., Aug. 9. Jacob Hewes.—Wheat, about 20 bushels per acre....Oats, full average....Potatoes promising....Corn was never better....Grass generally very heavy, say 1½ to 2¼ tuns per acre.

Lehigh Co., Pa., July 19. P. W. Flores.—The grain crops are good, though somewhat damaged by the cold of last Winter. Wheat and rye are harvested. Spring grain looks well, although the weather is very dry here now. Fruit is scarce; Cherries and Plums killed by frost in the Spring.

Chester Co., Penn., Aug. 10. Mark I Cox.—Wheat, harvested in good condition; crop a full average; rust and fly but little known.....Corn, about the usual number of acres planted; looks well in the middle and southern part of county. The early part of the season was unfavorable to its growth, being cold and wet; but recently fine showers and hot weather, except in the northern part of the county which is dry....Oats not as large a growth of straw as last year, but well headed, all harvested without any damage from rain....Potatoes promise a very good yield. More planted than usual....Hay crop was below the average....Fruit; apples not over half a crop. Pears not very plenty.

Tuscarawas Co., O., Aug. 5. George H. Smith.—Wheat considerably winter-killed, and in some sections injured by the midge—will average about two thirds of a full crop....Oats, short, not quite an average crop....Corn, planted late; much injured by worms, and drouth: the majority looks rather poor....Hay, timothy an average crop; clover badly winter-killed....Potatoes and garden vegetables have suffered from drouth....Fruit was all killed by late frost, except a few apples.

Washington Co., Ohio, July 10. A. Harmer.—Wheat I have to plow under, and sow buckwheat, as the midge has destroyed all. We had no rain in 5 weeks, and Spring wheat looks bad. Of white Poland oats I have a small plot. They are four feet high and about 80 kernels in an ear; straw very strong.

Hancock Co., Ind., Aug. 2. W. M. Baker.—Wheat, harvested in good order; as a general thing will not hold out in weight; some pieces completely trimmed of beard and blades by the army worm. Bearded Mediterranean yields the best. White wheat hardly worth the cutting. Corn; about the same planted as last year, looks very well; most of it in tassel; will take but a few days more seasonable weather to make the crop a large and sure one....Hay; a good growth, but some pieces badly damaged by army worms; Timothy seems to be a favorite with them....Oats; a good hight and pretty well filled...Buckwheat; but little sown....Potatoes; a considerable number planted, looking well....Fruit; apples and pears will be scarce; peaches plenty compared with the past three years.

Randolph Co., Ill., July 15. James Coulter, Sen.—Wheat considerably more sown than any former year; yield large and grain of excellent quality; gathered in fine condition....Corn, first planting generally destroyed by army worm; second planting seriously injured by chinch bug. Grass one half destroyed by army worms. Potatoes good, ready for use; a few bugs appearing. Fruit, apples poor quality; peaches first rate.

Logan Co., Ill., July 19. Alexander Leslie.—Wheat, Rye, Oats, and Barley, as good as we have ever known. Corn that was put in early is extra good. We will get no price for the above articles. *Wheat* is worth from 30 *to* 50 *cents*, *Oats* 10 *to* 15, *Corn* 9 *to* 12 cents. Plenty of old corn in the county. Pork 3 to 3½ cents per lb. *gross*.

Fulton Co., Ill., July 20th. Albert P. Gallet.—Wheat crop looks bad. Corn very good. Oats look very well.

Saline Co., Ill., Aug. 2. James M. Eaton.—Wheat, about one fourth more sown than last year, gathered in good condition, yield larger than ever before....Grass, double the amount raised last year and harvested in good order....Corn about usual amount; somewhat injured by drouth, but with plenty of rain from now, will give fair yield ..Oats, small quantity sown, not very good yield, injured by rust....Potatoes more planted than last year, look promising....Fruit, apples not much grown, about half a crop; peach trees very heavily loaded.

Benzonia, Mich., July 12. George Thompson.—Wheat, corn, oats, grass, etc., look fine. A frost in June, and one on the 12th of July was injurious in some places.

Calumet Co., Wis., July 26. F. Hachez. Prest. Germ. Agrl. Soc.—Winter wheat extensively sown, especially in the German settlement; looks unusually well, though considerably damaged by smut; that which was soaked, rolled with lime, and sown early, escaped. Spring wheat not as good, from unfavorable weather, but prospects of 16 to 18 bushels per acre ...Barley little grown; condition about same as Spring wheat....Oats largely sown—will probably yield 30 to 40 bushels per acre .. Peas are grown in large quantities instead of corn, which does not give a sure crop in this neighborhood. They look very good....Grass; Timothy in the lower regions very fine; in the higher lands, bad on account of the unfavorable weather. Clover, wintered very well, and where plaster or compost was put on, very large crop. Hungarian grass good.....Potatoes look promising.....Corn middling..... Fruit, little grown, although a great many trees are being planted now.

Richland Co., Wis., Aug. 5. J. P. Kepler.—Winter and Spring wheat, about one half more acres than in former years; the former just harvested, and very good; the latter an average crop....Oats, never better....Corn, just in silk, looks well.....Potatoes and other vegetables tolerably good....Grass is all cut, and was superb.

Lykins Co., Kansas, July 19. Joseph C. Sutton.—Wheat, both Winter and Spring varieties generally good, the latter somewhat injured by chinch bug. It is mostly harvested in good condition....Corn, large amount planted, looks finely, is now almost in the roasting ear....Potatoes generally good....Sorghum destroyed by chinch bug in some localities, but promises a fair crop....Prairie grass from 18 inches to 2 feet high. Hungarian grass very heavy.....Fruit; Peaches growing finely: Apples not yet in bearing; wild grapes and plums in profusion. Rather a wet season, and very warm, with frequent thunder storms.

Meade and Breckenridge Co's., Ky., August 1. T. C. Johnson.—Tobacco, an average crop put in, and is now promising well....Wheat, one fourth more sown than ever before; yield satisfactory, except of May wheat, which was injured by the cool and wet weather of May and June. Oats, one third less sown this year than last—fair yield—but no demand....Hay is a very heavy crop, though some fields were entirely destroyed by the army worm....Corn, though two weeks later than usual, was never more promising on the first of August....Fruit, most varieties of Peaches will be very abundant. Apples hardly half a crop.

St. Louis Co., Mo., July 18. Alton H. Hibber.—Wheat somewhat injured by rust and the army worm but a good crop....Corn, much replanted and rather late, but looks remarkably fine....Oats and grass very fine where they were saved from the army worm. This was done by ditching around the fields. The deficiency caused by the worm, will be more than made up by Hungarian grass... Fruit—Cherries were good, Peaches look well, Plums injured by curculio, and Grapes by blight—Apples hurt by late frosts; many of them are knotty and poor.

Prince Edward Co., C. W., July 15. "Aquila."—Cool backward weather has retarded crops. Spring wheat has mostly taken the place of Winter varieties here, and a greater breadth than ordinary was sown this year; it looks promising ...Rye less sown than usual; was considerably winter-killed, but many fields look well....Peas and Barley are extensively cultivated here, and the prospect is good for heavy crops....Oats look well....Corn is very backward and I think will be light, but it is not a staple crop.. .Potatoes promise well....The Hay crop will be heavy... Fruit will be scarce; Cherries and Pears a failure; Apples very light; Currants, Raspberries, and other small fruits, plenty.

Our Exhibition Tables.

The following articles, not before noticed, have been recently exhibited at the office of the *American Agriculturist.*

GRAIN: White Poland Oats, and Black Poland Oats, very fine, by Wm. S. Carpenter, N. Y.—Sweet Corn, ready for cooking July 16th, by G. M. Usher, Staten Island, N. Y.—Oats from L. I. wild lands, good growth, by Michael Smith, Suffolk Co.,—Spring Wheat, splendid growth, some heads six inches long, by Thomas Carpenter, Westchester Co., N. Y.—Zea Caragua, or South American Corn, a magnificent growth, W. F. Heins, N. Y.

POTATOES: Early Algiers, planted April 16, dug June 30; Wm. S. Carpenter, N. Y.—Early Sovereign, planted April 27, ready for the table June 27, called earliest variety, known; also good specimens Dyckman and California Seedling, the latter of the finest quality, by W. F. Heins, N. Y.—Blue Mercers, said to have grown from white seed, by Garret G. Newkirk, Hudson Co., N. J.

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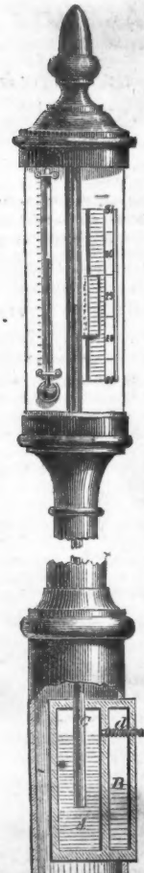

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This remarkable variety, after three years trial, has proved to be the most wonderful Strawberry in cultivation, it has been produced this year, sixteen of which weighed one pound; it is as productive as the Wilson, much larger, and finer flavored, the berry is a beautiful scarlet, and commands the highest market price; it continues long in bearing, and maintains its large size throughout; it was sent to New-York market from Watervliet, N. Y., up to the 20th of July, long after all other varieties had disappeared, commanding a high price; it is without doubt the most valuable market berry in cultivation; it is much more prolific than the *Triomphe de Gand*, larger in size, and altogether more attractive. The Austin will now be offered at greatly reduced prices, giving all an opportunity to plant this variety for a most profitable market berry. Plants will be delivered in rotation as ordered, at $1 per doz.; $5 per hundred; or $30 per thousand.

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Seed Wheat, Rye, Barley, etc.

PATENT CYLINDER PLOWS, of all sizes, by far the best plows ever introduced.

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Successors to R. L. Allen.

Brooklyn Horticultural Society
WILL HOLD THEIR
REGULAR FALL EXHIBITION
AT THE
ACADEMY OF MUSIC
ON THE
18th, 19th, and 20th of September, 1861.

Persons desirous of competing, who have not received a Schedule of Premiums, will be furnished by applying to the Corresponding Secretary, C. B. Miller, 29 Broadway, N. Y.

From the efforts that are being made by the officers and members, it is expected this will be the best Exhibition ever held by this Society.

All friendly to it are invited to contribute either Plants, Fruits, or Flowers.

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$20 to $40 per 100, with from 1 to 6 ft. of wood; per 1000, much less. Diana, $16 per 100. Concord $10 per 100. Cuyahoga, $1 each. Send for Catalogue. Enclose stamp to prepay postage. Address WILLIAM PERRY & SON, Bridgeport, Conn.

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Trifolium incarnatum hatif, (early.)
Trifolium incarnatum tardif, (late.)

A new variety of the Clover, unequalled for soiling, highly recommended by English and French cultivators. It may be sown directly after harvesting the wheat crop, until the first of October. It is cultivated with very little labor, and without risk, and yields an early and very abundant growth of green feed of first rate quality, both for the stable and feeding stall. If sown broadcast, at the rate of 25 lbs. to the acre, over any clean wheat stubble, after a shower, and well harrowed in, it will germinate freely, and if the land be in ordinarily good heart, the plant will thrive most satisfactorily, and a large quantity of the most useful provender is thus provided early in the season, at a trifling expense. The two varieties, early and late flowering, should be sown at the same time, in separate patches, by which method a succession may be kept up for many weeks. *Price 25 cents per lb.*

Trial packages, containing half a pound, will be mailed post-paid to any address in the Union, on receipt of seven three-cent stamps. Address

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Austin, the largest strawberry $1 p. doz.; $5 p. 100; $30 p. 1000.

Deptford, or Excelsior White, the best white strawberry in cultivation, as large as the Wilson, per doz. $1; per 100, $5.

Downer's Prolific, a beautiful scarlet berry, more productive than the Wilson, per doz., 50 cts; per 100, $3. Introduced last year by Mr. Downer, of Kentucky, at $5 per dozen.

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Feast's Filmore, very large and attractive, per doz., 50 cts.

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Staten Islander, very large and productive, per doz., 50 cts.

Bartlett, superior to the Wilson, large sweet, per doz., 50 cts.

Wizard of the North, remarkable for its size, per doz., $2.

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La Constance, very large and beautiful color, per doz., $1.

Trolop's Victoria, of the largest size, valuable, per doz., 50 c.

Triomphe de Gand, per 100, $1.50; *Scott's Seedling*, per 100, $1; *Jenny Lind*, per 100, $1; *Wilson's Albany*, per 100, $1; per 1000, $8.

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ELLWANGER & BARRY

RESPECTFULLY invite the attention of the public to their present immense stock, covering upwards of FIVE HUNDRED ACRES OF LAND, and embracing everything desirable in both

Fruit and Ornamental Department,

Grown in the very best manner, and offered either at wholesale or retail, at greatly reduced prices.

Parties who contemplate planting should avail themselves of this opportunity, the like of which may not occur soon again.

Descriptive and Wholesale Catalogues forwarded gratis, and all information as to prices, etc., promptly given on application.

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August 1, 1861. ROCHESTER, N. Y.

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The Subscribers invite the attention of Planters, Nurserymen, and Dealers, to their large Nursery Stock, which, for thriftiness of growth and beauty, is seldom excelled, if equalled, and will be offered at prices to suit the times, consisting of Apple, Pear, Cherry, Peach, Plum, Apricot, and Quince Trees. Apple and Peach Trees, a large stock.

Also, the small fruits, such as Grape Vines, Currants, Gooseberries, Raspberry and Strawberry Plants,
Of all desirable sorts.

Also, a large stock of Ornamental Trees, both Deciduous and Evergreen. STEPHEN HOYT & SONS,
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Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c., &c.

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THOROUGH BRED AYRSHIRES, ALDERNEYS, DEVONS. For sale at *low* prices for cash by ALFRED M. TREDWELL, Madison, Morris Co., N. J.

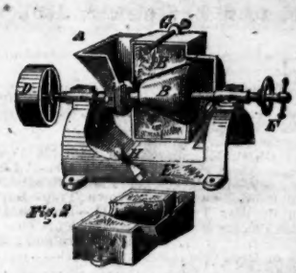

Fig. 2

EXCELSIOR MILL
FOR FARMERS AND MILLERS.

The American Institute, at their last Fair, awarded the premium of a LARGE SILVER MEDAL to this Mill.

The grinding surfaces of this Mill are BURR STONE, of conical form, (see Cut above,) so adjusted that the finest flour and the coarsest feed may be ground with the same Mill. Any person can dress the stones with an ordinary pick in one hour. Will grind 3000 bushels of grain before requiring to be redressed, and

WILL LAST A LIFE TIME.

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Price of No. 2 Mill for Miller's use..... 140
Price of No. 3 Mill for Miller's use..... 170

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HORSE POWER,

FOR DRIVING THRESHING MACHINES, FARM MILLS, HAY CUTTERS, COTTON GINS, CIRCULAR SAWS, MOULDING AND PLANING MACHINES, LATHES, ETC.

This power has proved itself to be THE BEST ever invented. The friction is reduced by IRON BALLS, so arranged in all the bearings, that the whole weight of the castings runs upon them. THREE POUNDS DRAUGHT at the end of a ten feet lever, will keep it in motion! thus permitting the *entire strength* of the horses to be used on the machine to be driven. *One horse* will do as much work on this power as *two* on the Endless Chain Power. IT IS PORTABLE and may be used IN THE FIELD as well as in the house. More than TWENTY FIVE PER CENT of horse flesh is saved, over ANY OTHER POWER IN USE. It is simple in construction, and not liable to get out of order.

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Price of Power for 1 to 6 horses..... 175

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Chester County Pigs.

The undersigned continues to execute orders as heretofore, for his pure stock of the above, which will be carefully shipped to any point of the Union.

The selections are made only from pure bloods, and chiefly from premium animals, which have been uniformly successful at our local Fairs. He refers to purchasers from him in all sections of the Union.

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N. B. This being the last and only importation this season, the public can rely on getting a perfectly pure breed.

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RAW BONE
SUPER-PHOSPHATE OF LIME.

MANUFACTURED FROM UNBURNED
Bones, by BAUGH & SONS,
No. 20 South Wharves,
PHILADELPHIA.
Cash Price, $45 per 2000 lbs.

FARMERS and DEALERS can rely upon the assurance that the character of this well-known manure is still fully maintained.

Being prepared strictly in accordance with scientific principles, from Bones in their natural state, without any process of burning or baking, and under the personal supervision of the proprietors, they can honestly guarantee it as represented in this respect, and also as being entirely free from adulteration.

BAUGH & SONS,
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GENUINE
SUPER-PHOSPHATE OF LIME,

Manufactured from **Raw Bones**, dissolved in *Sulphuric Acid*, with a few important additions, *at $40 per ton*, by

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(For results of the present season see *American Agriculturist*, for August, page 232.)

We guarantee every ton of our manufacture to be of uniform quality, and invite trials or chemical analysis.

We also manufacture from RAW, (OR UNBURNED), BONES, the fine, medium, and coarse ground **Bone Manure**, for lasting as well as immediate effect upon all kinds of farm crops. The coarse ground is particularly valuable for *Fruit Trees* and *Grape Vines*, which require a constant and lasting source of nourishment.

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